

Amateur Radio Catalog

SUMMER
1995



AMATEUR ELECTRONIC SUPPLY® INC.

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Breakthrough filter technology!

Pull out signals no one else can!

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**UNSURPASSED SIGNAL
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TECHNOLOGY ON
TRANSMIT AND RECEIVE!**

ICOM next generation technology for HF operators is now available! The IC-775DSP (also available without DSP as the IC-775, a version which can be modified at any time with the optional UI-100) is engineered from the ground up, using next generation design and components, offering a combination of features and performance you'll find nowhere else.

- **TRANSMIT DSP*** Precise control of transmit signals at the modulation stage produces a high quality SSB transmit signal that analog methods can't match.
- **RECEIVE DSP*** The digital signal processor separates the desired signal out from the noise before it enters the audio amplifier! You can pull very weak signals right out of the noise!
- **ADVANCED INTERFERENCE REJECTION AND NOISE REDUCTION** Digital automatic notch*, digital low/high pass filters*, digital ultra-narrow CW filter*, manual IF notch, manual audio peak filter,

CW reverse mode and a noise blanker (with adjustable level and width) are a next generation combination of features providing incredibly clear signals.

- **DUAL WATCH** Dual watch with 2 independent tuning knobs enables monitoring of 2 frequencies... simultaneously.
- **TWIN PASS BAND TUNING** Allows you to zero in on and isolate a signal from both sides of the pass band. Ideal for contests, nets, etc...!
- **200 WATTS** Power MOS FETs in all stages of the PA unit provide excellent signal quality, good IMD characteristics and reliable full-duty cycle operation.
- **BUILT IN ANTENNA TUNER** A high speed tuner is built-in and matches the connected antenna in all ham bands, including 160 m.
- **NEW DDS** The new Direct Digital Synthesizer system uses a new PLL which operates without a mixer and uses a single crystal which provides very high stability.

• **CW FEATURES** CW enthusiasts will love the electronic memory keyer, CW pitch control, CW reverse, full break-in (QSK) and two key jacks.

The new IC-775 DSP is the next generation rig you've been patiently waiting for. For more information about the IC-775DSP or the IC-775, visit your local ICOM dealer, contact ICOM Technical Support on CompuServe® @ 75540,525, or call ICOM's brochure hotline for more information: (206) 450-6088.

features you've only dreamed of

- ICOM DSP on Transmit and Receive
- Noise Reduction/Auto Notch*
- Twin Pass Band Tuning
- Dual Receive
- 200W MOS FET PA with built-in Power Supply
- Digital Noise Reduction*:
 - Digital Low and High Pass Filters
 - Digital Modulation/Demodulation
 - Digital Automatic Notch
 - Digital Ultra-Narrow CW Filter
 - Digital Automatic APF (Audio Peak Filter)
- Rx 100kHz-29.990 MHz
- New Single Crystal Control DDS
- RTTY/DATA Mode
- HF Packet Ready
- IF Notch
- APF (Audio Peak Filter)
- Quick-Split Function
- Memory CW Keyer
- CW Pitch Control & CW Reverse Mode
- Two CW Key Jacks
- 1Hz Tuning and Display
- Large LCD with new CFL Back Light
- Built-In Automatic Antenna Tuner
- Dual Antenna System
- Selectable Pre-Amp (2 Levels) and RF Attenuator (3 Levels)
- Triple Band Stacking Register
- Built-In Tone Encoder
- VOX
- 99 Memory Channels
- XFC
- Noise Blanker with Adjustable Level and Width
- AGC with Adjustable Time Constant
- RF Speech Compressor
- Optional SSB filters
- Optional Speech Synthesizer

ICOM
Experience the Quality™

AES® Amateur Radio Equipment Price List

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All prices and specifications are subject to change without notice. Due to foreign currency fluctuations, promotions, manufacturer's coupons, etc. prices may vary. Please confirm prices before ordering. AES® is not responsible for typographical errors or omissions.

CODES SHOWN NEXT TO PRICES

(T) • Item too large for UPS. Truck shipment only. No COD, send payment in advance or use charge card for merchandise; freight charges will be collected upon delivery.

NOTE: Charges for truck shipments from 1-99 lbs are running a minimum of \$80.00, plus local destination charges. It is advisable to contact a local freight office for a quotation.

(D) • DISCONTINUED by Manufacturer but still available from stock in limited quantities when this price list was published.

(†) • TEMPORARY LOW PRICE due to Special Purchase, over-stock, etc. Quantities may be limited at price shown.

(Δ) • Item not discontinued by Manufacturer but probably will not be available from our stores when present stock sold out.

End of line STORE LOCATION CODES (means Close-out or Special items were at these stores): (m) Milwaukee; (w) Wickliffe; (f) Orlando; (c) Clearwater; (v) Las Vegas; (*) all AES stores

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AEA (AEA)	Reg	Sale
DC-1 Cigarette lighter cordΔmwfv	\$ 7.00	595
KK-1 Keyboard keyer for IBM PC	199.00	1895
KKCOM Optional utility program	49.00	

DATA CONTROLLERS

PK-12 1200 bps VHF/UHF packet controller ...	\$129.00	1195
100K/PK-12 100K MailDrop upgrade; PK-12	50.00	
AC-1 12vdc 600 ma adaptor	21.00	
APRS Adapter cable for GPS Rcvr to TNC	30.00	
PK-96 9600 baud packet controller/32K RAM	229.00	1995
100K 100K memory upgrade for PK-96	50.00	
PK-96/100K 9600 baud controller/128K RAM	279.00	2495
PC-Pakratt-88 IBM prog; PK12/88/96 Dmwfv	49.00	395

AEA - continued

PC Pakratt Lite Packet only terminal prog .	49.00	
PK-232MBX Controller/int VHF/HF modem/FAX	399.00	CALL
PK-900 Multi-mode digital controller w/FAX ..	569.00	4695
DSP-1232 Single port multi-mode controller .	789.00	6995
DSP-2322 Switchable ch multi-mode controller	999.00	8995
9600 bps modem card option for PK-900	75.00	
AC-4 12vdc 1A power supply	32.00	
AEA-FAX III-900 PK-900/IBM FAX software	75.00	
COM Pakratt w/FAX C-64 program; PK-88/232	79.00	745
MacRATT w/FAX Macintosh prog; PK-88/232	69.00	645
PC-Pakratt II w/FAX IBM prog; 12/88/232 .	69.00	645
PC-Pakratt for Windows 2.0/FAX IBM; 12/88/232	129.00	1195
Log Windows 2.0 Program for IBM	99.00	895
Extra PK-232 to radio open ended cable	9.00	
IH CABLE PK-232 - Icom/Yaesu/Alinco HT ..	25.00	
IM CABLE PK-232 - Icom 8-pin mic cable ..	25.00	
IW CABLE PK-232 - Icom IC-W2A cable	25.00	
KA CABLE PK-232 - Kenwood 13-pin cable	30.00	
KH CABLE PK-232 - Kenwood HT cable	25.00	
KM CABLE PK-232 - Kenwood/Alinco 8-pin mic	25.00	
YM CABLE PK-232 - Yaesu 8-pin mic cable	25.00	
RS-232 Y cable	39.00	
Technical manual; PK-232	25.00	
WeFax-256 WX FAX prog; DSP-1232/232 .	129.00	1195
AEA-FAX III Facsimile & wire photo program .	149.00	995
PCB-88 IBM compatible plug-in packet adapter..	179.00	1595

ANTENNAS

IsoLoop 10-30 150w 10-30MHz 43" loop/50' cable	\$389.00	3295
50' shielded loop cable, new style	29.00	
100' shielded loop cable w/connectors	39.00	
IT-1 IsoTuner Automatic tuner for IsoLoop .	279.00	2395
IsoPole 144 2m base station antenna	59.00	
IsoPole 220 220MHz base station antenna ...	59.00	495
IsoPole 440 440MHz base station antenna ...	89.00	
HR-1 2m 1/2 wave telescopic whip w/BNC	24.00	
HR-2 220MHz 1/2 wave telescopic whip w/BNC	24.00	
SWR-121 HF Antenna performance analyzer .	399.00	3495
SWR-121V/U VHF/UHF ant performance analy	469.00	3995
AA.COM SWR curve IBM soft; 121/121V/U ..	75.00	695
Carrying Case For SWR-121/121V/U	29.00	

MISCELLANEOUS

ARE-60/HL-60 HamLink Phone controller	\$269.00	2395
ARE-61/HL-61 Interface cable for Icom	50.00	
ARE-62/HL-62 Interface cable for Kenwood	50.00	
ARE-63/HL-63 Interface cable for Yaesu	60.00	
OP-80 OpLink For fast CW/stereo headset .	130.00	1095
ARE-10 Silencer Ext spkr w/DTMF decoder ..Δv	100.00	695
ARE-20 Digitalker Voice synth freq counter Δmv	250.00	1695
RL-60 Radio Link HF remote via handheld ...	329.00	2895
ST-1 Satellite tracking hardware/software	399.00	3695
AVT Master Amiga Video Sys; SSTV/FAX Δmwfv	319.00	1995
DM-1 2m/220/440 FM deviation meter	169.00	1595
430-16 16 el 430MHz 14.3db beam	119.00	795
ATV Workbook	14.99	

AEA - continued

World Clock	25.00	Reg Sale
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486-DX66 66MHz Intel/425M/4M/28SVGA color
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ARRL (ARR)

101 1995 Radio Amateur's Handbook	\$ 30.00
110 200 Meters and Down (early ham radio) .	8.00
115 AX.25 (packet radio)	8.00
120 Advanced Class License Manual	12.00
126 Antenna Book w/IBM software	30.00
130 Antenna Compendium	10.00
135 Antenna Compendium II	12.00
138 Antenna Compendium IV w/software	20.00
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185 Hints and Kinks	10.00
190 Hostage in the Woods	6.00
195 Introduction to Morse Code cassettes	10.00
198 Introduction to Radio Frequency Design .	30.00
200 Log Book	3.50
205 Low Profile Amateur Radio	8.00
210 Morse Code the Essential Language	6.00
215 Morse Tutor software for IBM	20.00
220 Night Signals	5.95
230 Novice Notes: The Book	6.00
236 Now You're Talking II (new ham)	19.00
240 Operating Manual	18.00
250 1995 Passport to Worldband Radio	19.95
252 Packet: Speed, More Speed & Applications	15.00
255 QST binder	12.00
260 RFI-How to Find It & Fix It	15.00
265 Radiogram message blanks	2.00
270 Repeater Directory	7.00
275 Satellite Anthology	10.00
280 Satellite Experimenter's Handbook	20.00
285 Set 1 5-10 wpm code practice cassettes .	10.00
290 Set 2 10-15 wpm code practice cassettes	10.00
295 Set 3 15-22 wpm code practice cassettes	10.00
300 Set 4 13-14 wpm code practice cassettes	10.00
305 Solid State Design	15.00
310 Technician Class License Manual	6.00
320 Transmitter Hunting	19.00
328 Understanding Basic Electronics	17.00
330 W1FB's Antenna Notebook	10.00
335 W1FB's Help for New Hams	10.00
340 W1FB's QRP Notebook	10.00

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TOMPKINS BOOKS

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375	Grand Canyon QSO	5.00	
380	Murder by QRM	5.00	
385	SOS at Midnight	5.00	

RSGB PUBLICATIONS

405	Radio Communications Handbook	\$ 35.00	
410	VHF/UHF Manual	30.00	

AIM (AIM)

24-7474P	Precision knife set	\$ 17.50	9 ⁹⁵
24-7735P	Coax stripper; RG-58/59/62	38.25	19 ⁹⁵
24-7736P	Coax stripper; RG-59/6/8281	38.25	19 ⁹⁵
24-7739P	Coax stripper; RG-8/11/213	62.85	29 ⁹⁵
24-9912P	Crimp tool for RG-174	47.50	14 ⁹⁵
37-208	6-socket wall surge protector	32.85	8 ⁹⁵
37-503	6-socket surge/EMI/RFI filter	41.85	29 ⁹⁵
38-305	500ma 3/4.5/6/7.5/9/12vdc adapter	17.85	12 ⁹⁵
38-312	1.2A 1.5/3/4.5/6/7.5/9/12vdc adapt	49.50	24 ⁹⁵
38-384	4A power supply, 5A surge	88.50	39 ⁹⁵
46-221	20K ohms/volt VOM	29.95	12 ⁹⁵
64-3UUP	3' RG-58 w/PL-259s	7.00	
64-6UUP	6' RG-58 w/PL-259s	8.00	
64-9UUP	9' RG-58 w/PL-259s	9.00	
64-12UUP	12' RG-58 w/PL-259s	10.00	
64-18UUP	18' RG-58 w/PL-259s	11.00	

ALINCO (ALI)

ACCESSORIES FOR DISCONTINUED HT'S

EBP-10NA	7.2v 700ma quick chg batt	\$ 43.00	
EBP-12NA	12v 700ma quick chg batt	62.00	
EDC-2	Cig charging cord; EBP-7NAZ	9.00	
EDC-8Z	Mobile DC pwr cable w/filter	20.00	15 ⁹⁵
EDC-16	Cigarette lighter cable	12.00	
EDC-21	Extra wall cgr for EBP-10NA	18.00	
EDC-22	Wall charger for EBP-12NA	22.00	
EDC-26	DC cord/cgr w/filter; EBP-10NA	17.00	
EDH-1	Dry cell battery case	19.00	
EJ-6U	Tone squelch unit	48.00	39 ⁹⁵
ESC-10	Case; DJ-162T w/EBP-10NA	23.00	
ESC-11	Case; DJ-560T/A, EBP-10NA	23.00	
DJ-F1T	2w 2m FM HT/batt/cgr/TTP	349.00	CALL
DJ-F1T/HP	5w 2m FM HT/batt/cgr/TTP	379.00	CALL
DJ-180T	2w 2m FM HT/batt/cgr/TTP	289.00	CALL
DJ-180TH	5w 2m FM HT/batt/cgr/TTP	309.00	CALL
DJ-480T	440 FM HT/batt/cgr/TTP	359.00	CALL
DJ-580T	2.5w 2m/440 FM HT/batt/cgr/TTP	489.00	CALL

\$20 coupon - DJ-580T thru 5/31/95

DJ-582T	2.5w 2m/440 FM HT/batt/cgr/TTP	499.00	CALL
EB-3	Belt clip	5.00	
EB-5	Shoulder belt w/soft case	54.00	29 ⁹⁵
EB-6	Mobile bracket for DJ-180T	22.00	
EBP-14N	7.2v 400ma thin nicad	62.00	44 ⁹⁵
EBP-16N	7.2v 700ma nicad battery	47.00	
EBP-18N	12v 600ma nicad battery	76.00	
EBP-20N/EBP-26N	Extra 7.2v 700ma; 180/580	52.00	
EBP-22N/EBP-28N	12v 600ma batt; 180/580	80.00	
EBP-24N	7.2v 1200ma batt; 180/580/582T	79.00	
EDC-24	Wall cgr; 14/16/18/20/22/24N	24.00	
EDC-34	Quick charger	103.00	
EDC-36	Mobile DC power cable w/filter	22.00	
EDC-37	13.8v power cable	9.00	
EDC-43	Cig lighter cable	10.00	
EDC-49	Battery charger; EBP-20/22/24N	24.00	

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EDH-11	AA alk pack; DJ-180/580/582T	21.00	
EDH-12	DC jack adapter; DJ-180T	12.00	
EJ-12U	Tone decode unit; DJ-F1T	51.00	
EJ-14U	50 ch memory unit; DJ-180T	23.00	
EJ-15U	200 ch memory unit; DJ-180T	34.00	
EME-4	Ear/microphone w/PTT	34.00	
EME-6	Earphone	14.00	
EME-10	Headset w/VOX/PTT	71.00	
EME-11	Ear/microphone w/PTT/VOX	52.00	
EMS-22	Speaker/mic	44.00	
EMS-8Z	Remote speaker/mic	48.00	
ESC-15	Soft case for DJ-F1T	20.00	
ESC-17	Soft case; 580/582T w/EBP-20N	22.00	
ESC-18	Soft case; DJ-180T w/EBP-20N	22.00	
ESC-19	Soft case; DJ-180T w/EBP-22N	24.00	
ESC-26	Soft case; 580/582T w/EBP-22/24N	24.00	
DJ-G1T	2m FM HT/batt/cgr/TTP/ch scope	369.00	CALL

\$30 coupon - DJ-G1T thru 5/31/95

EB-6	Mobile bracket	22.00	
EBP-30N	7.2v 700ma nicad battery	62.00	
EBP-31N	7.2v 1200ma nicad battery	79.00	
EBP-32N	12v 722ma nicad battery	95.00	
EDC-36	Mobile DC power cable w/filter	22.00	
EDC-37	13.8v power cable	9.00	
EDC-52	Quick charger	119.00	
EDC-55	Wall cgr; EBP-30/31/32N	24.00	
EDH-14	Dry cell battery case	21.00	
EJ-16U	Tone squelch unit	60.00	
EME-12	Headset w/earphone/mic/VOX	71.00	
EME-13	Headset w/ear bud/mic/VOX	71.00	
EME-15	Earphone/mic w/VOX	55.00	
EMS-8Z	Remote speaker/mic	48.00	
EMS-9	Speaker/mic	44.00	
ESC-23	Soft case for EBP-30N	22.00	
ESC-24	Soft case for EBP-31N/32N	23.00	
DR-M06T	10w 6m FM Xcvr w/TTP mic	479.00	CALL
EJ-20U	Tone squelch unit	46.00	
DR-130T	50w 2m FM Xcvr w/TTP mic	419.00	CALL

\$15 coupon - DR-130T thru 5/31/95

DR-150T	50w 2m FM Xcvr w/TTP mic/9600	479.00	CALL
CC-150	Cloning cable for DR-150T	15.00	
DR-430T	440 FM Xcvr w/TTP mic	499.00	CALL
EJ-19U	Memory expansion unit	35.00	
EJ-20U	Tone squelch unit	46.00	
EJ-8U	DTMF squelch; DR-590/592/599	47.00	
DR-600TB	45/35w 2m/440 FM Xcvr/TTP mic	749.00	CALL

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EDC-19	9.75" separation mounting kit	40.00	
EDC-20	16" separation mounting kit	46.00	
EJ-7U	Tone squelch unit	69.00	
DR-610T	50/35w 2m/440 FM Xcvr/TTP mic	819.00	CALL
DR-1200T	25w 2m FM data radio	349.00	CALL
EHM-36A/EMS-10	TTP mic; DR-1200T only	56.00	
DR-1200TH2	25w 2m FM 9600 baud only radio	389.00	CALL

ALPHA DELTA (ALP)

R-T	200w 500 MHz lightning protector	\$ 32.95	
	Extra arc-plug cartridge for R-T	12.95	
R-T/N	200w thru 1 GHz type N protector	39.95	
	Extra arc-plug cartridge for R-T/N	12.95	
HV	2kw 500 MHz lightning protector	35.95	
	Extra arc-plug cartridge for HV	15.95	
HV/N	2kw thru 1 GHz type N protector	42.95	
	Extra arc-plug cartridge for HV/N	15.95	
LT	200w thru 10m 'T' SO-239 protector	22.95	
	Extra arc-plug cartridge for LT or LT/N	17.95	
Delta-2	500 MHz 2-pos coax switch/protector	49.95	
Delta-2/N	1.3 GHz 2-pos type N switch/protector	64.95	
Delta-4	500 MHz 4-pos coax switch/protector	74.95	
Delta-4/N	1.3 GHz 4-pos type N switch/protector	89.95	
D-4	Extra arc-plug; Delta-2/2N/4/4N	9.00	
DX-A	160-80-40m twin sloper antenna	59.95	
DX-B	160-80-40-30m 60' sloper ant	69.95	
DX-CC	80-10m 5-band 82' no trap, no tuner dipole	99.95	
DX-DD	80-40m 82' Delta Dipole antenna	79.95	
DX-EE	40-10m 4-band 40' no trap, no tuner dipole	89.95	
DX-SWL	AM broadcast-13m 60' SWL sloper ant	69.95	

ALPHA DELTA - continued

DX-SWL-S	90-13m 40' SWL sloper ant Δmwfv	59.95	39 ⁹⁵
DX-Ultra	AM broadcast-30MHz 80' SWL dipole	119.95	
Delta-C	Kit w/ctr ins/2 end ins/static protect	29.95	
SEP	Extra arc-plug cart; DX-Ultra/Delta-C	15.95	
Delta-CIN	Antenna end insulator	1.00	

ALPHA NEONX (ALN)

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Call w/On Air	Neon sign; specify; spec order*	249.95	

*Neon signs are custom made and drop-shipped from the factory and are not returnable.

AMECO PUBLICATIONS (AME)

4-01	Code Course Instruction Booklet	\$ 1.50	
6-01	Mastering the Morse Code	2.50	
12-01	General Class FCC Test Manual	9.95	
17-01	Extra Class FCC Test Manual	5.95	
23-01	Novice Theory Course	6.95	
26-01	Advanced Class FCC Test Manual	5.95	
27-01	Novice Class FCC Test Manual	5.95	
28-01	Technician Class FCC Test Manual	5.95	
78-01	Codeless Technician FCC Test Manual	9.95	
102-01	Amateur Radio Theory Course	7.95	
EN-1	Novice Class Exam	1.95	

CODE COURSES - CASSETTE TAPES

100-T	Junior code tape, 0-7 1/2 wpm	\$ 5.95	
101-T	Senior code tapes, 0-18 wpm	10.95	
103-T	Advanced code tape, 8-18 wpm	5.95	
104-T	Extra Class code tape, 20 wpm	5.95	
105-QT	General Class QSO code course tape	5.95	
106-QT	Extra Class QSO code course tape	5.95	
107-PC-2	IBM Morse Code Course, version 2.0	29.95	
NP-1	Novice Code & Theory Course	10.95	

CODE PRACTICE OSCILLATORS & CODE KEYS

OCM-2K	Code oscillator & CW monitor kit	\$ 19.95	
OCM-2W	Wired oscillator & CW monitor	24.95	
K-1	Bakelite type key	7.95	
K-4	Brass type key	12.95	

PREAMPLIFIERS

TPA	Tunable preamp & indoor active ant	\$ 76.95	69 ⁹⁵
P-9T	Power supply for TPA	9.50	
PT-3	2-54 MHz transceiver preamp	124.95	119 ⁹⁵
P-12T	Power supply for PT-3	9.95	

FILTERS

HP-75T	75 ohm high-pass filter	\$ 12.95	
HP-300T	300 ohm high-pass filter	12.95	

AMERITRON (AMR)

AL-80B	1kw PEP out linear (3-500Z)	1195.00	1069
AL-82	1.5kw PEP out linear (2 3-500Zs)	2095.00	1769
AL-800	1250w PEP out linear (3CX800A7)	1595.00	1429
AL-800H	1.5kw PEP out linear (2 3CX800A7)	2295.00	2059
AL-811	600w PEP out linear (3 811As)	649.00	589 ⁹⁵
AL-811H	800w PEP out linear (4 811As)	795.00	719 ⁹⁵
AL-1200	1.5kw PEP out linear (3CX-1200A7)	2195.00	1829
AL-1500	Linear amplifier (8877)	2695.00	2249
ALS-500M	600w PEP out solid state mob amp	799.00	679 ⁹⁵
ALS-600	700w PEP out solid state amp w/ps	1299.00	1099
ATR-15	1.5kw antenna tuner	399.00	349 ⁹⁵
ICP-120	120v inrush protector	79.00	
ICP-240	240v inrush protector	79.00	
QSK-5	Stand alone T/R switch	349.00	299 ⁹⁵
QSK-5PC	PC board kit; T/R switch	249.00	209 ⁹⁵
CF-5	Cooling fan for QSK-5	39.95	
RCS-4	4-pos wireless remote coax switch	134.00	124 ⁹⁵
RCS-8V	160-2m 5-pos remote coax switch	149.00	139 ⁹⁵

Note: RCS-8V requires 8-wire control cable.

ANLI (ANL)

A-200	2m/440 4.5/7.2db 6' base antenna	\$ 99.95	89 ⁹⁵
A-300	2m/440 6.8/9.3db 11.5' base ant	149.95	129 ⁹⁵
A-1000	2m/440 8.5/11.8db 17.5' base ant	199.95	169 ⁹⁵
AL-800	2m/440 BNC rubber duck antenna	39.90	
RD-8	2m/440 6.5" BNC whip	19.95	
RD-78	2m/440 15" BNC whip	26.90	
S-1	2m/440 2.15/3.2db 14" whip	27.90	
CM-1	Clip mt w/angle adjust BNC, coax	19.95	
CM-2	Clip mt w/BNC, coax	17.95	

ANLI - continued		Reg	Sale
WA-1 Window/sun roof clip mt/BNC, coax	23.95		
AT-2 2m/440 3/5db NMO mt mobile ant	49.95		
AT-2/Plus 2m/440 4.1/6db NMO mt mob	59.95		
AT-2A/Plus 2m/220 4.1/4.8 NMO mt mob	59.95		
AT-2/Plus Tri 2m/220/440 4.1/4.8/6db NMO	69.95		
AT-3 2m/440 2.15/3db 19" UHF mt mob	29.95		
AT-4/NMO 2m/440 3/5.5db 38" NMO mob	49.95		
AT-4/UHF 2m/440 3/5.5db 38" UHF mt mob	47.95		
MC-1/NMO NMO-style magnet mt w/coax	28.95		
MC-1/UHF UHF-style magnet mt w/coax	28.95		
TA-1/NMO NMO-style trunk mt w/coax	28.95		
TA-1/UHF UHF-style trunk mt w/coax	28.95		
TA-2/NMO Hvy duty NMO rubber coat tnk lip mt	34.95		
TA-2/UHF Hvy duty UHF rubber coat tnk lip mt	34.95		
DX-2 2m/440 800/500w duplexer	43.95		
DX-2/Lead 2m/440 800/500w duplexer w/lead	46.95		
MT-1 2m/440 15/60w SWR/power meter	49.95		
SB-152 12vdc 6.5A port batt pwr pack .Dmwf	59.95	49 ⁹⁵	
SB-752 12vdc 6.5A port batt power pack	59.95		
SB-791 5A ps w/cig outlet; not for radio .Dmv	29.95	19 ⁹⁵	
TX-3 2m/440/900 800/800/50w triplexer	54.95		

Antenna Specialists (ASP)		Reg	Sale
VHF/UHF ANTENNAS			
AP-143 2m on glass cellular look-alike ant	\$ 65.00	59 ⁹⁵	
APR151.3 2m 3db on glass antenna	49.25	44 ⁹⁵	
AP-453 440 on glass cell look-alike ant Dmwfv	65.00	49 ⁹⁵	
APR450.5G 440 5db on glass ant .Dmwfv	54.50	39 ⁹⁵	
KAV-382 On glass replacement mtg kit	7.75		
ASPC201L 108-512MHz ¼ wv ¾ " hole ant .Δw	22.75	12 ⁹⁵	
HOLE PLUGS			
ASC-34 For 1½" hole .Dmwfv	\$ 4.75	95¢	
ASC-35 For ¾" hole .Dm	2.25		
ASC-37 For ¾" hole .Dmfv	2.25		
ASC-39 For ¾" hole .Dmwfv	2.25	49¢	

Antenna Supermarket (ANT)		Reg	Sale
Eavesdropper* 60-11m trap dipole SWL ant	\$ 79.95		
*Specify SO-239 or twin-lead			
SWL Sloper 120-11m SWL antenna	79.95		
ARTSCI (ART)		Reg	Sale
Amateur Handbook	\$ 14.95		
Lost Users Manuals	19.95		
Riding the Airwaves with Alpha & Zulu	14.95		
US Repeater Guide	9.95		

ASTATIC (AST)		Reg	Sale
10DA-L Dynamic mic head (no stand or cable)	\$ 69.99	49 ⁹⁵	
D-104-L Crystal mic head (no stand or cable)	49.99	39 ⁹⁵	
T-U69 Amplified desk stand	52.00	49 ⁹⁵	
T-U69-D104 Amp mic, 6-wire w/stand	99.99	79 ⁹⁵	
MC-320 Crystal mic cartridge for D-104	19.99		
MC-321 Ceramic mic cartridge for D-104	19.99		

ASTRON (ASR)		Reg	Sale
RS-4L 3A ps, 4A surge, w/cig lighter socket	\$ 57.95	49 ⁹⁵	
RS-7A 5A power supply, 7A surge	68.95	59 ⁹⁵	
RS-10A 7.5A power supply, 10A surge	85.95	69 ⁹⁵	
RS-12A 9A power supply, 12A surge	99.95	79 ⁹⁵	
RS-12S 9A ps, 12A surge, w/speaker	112.95	89 ⁹⁵	
RS-20A 16A power supply, 20A surge	121.95	99 ⁹⁵	
RS-35A 25A power supply, 35A surge	197.95	149 ⁹⁵	
RS-35A/220V 220v 25A ps, 35A surge	217.75	169 ⁹⁵	
RS-50A 37A power supply, 50A surge	285.95	219 ⁹⁵	
RS-70A 57A power supply, 70A surge	339.95	259 ⁹⁵	
RS-20M 16A ps w/meters, 20A surge	144.95	119 ⁹⁵	
RS-35M 25A ps w/meters, 35A surge	204.95	169 ⁹⁵	
RS-50M 37A ps w/meters, 50A surge	314.95	239 ⁹⁵	
RS-70M 57A ps w/meters, 70A surge	372.95	289 ⁹⁵	
VS-20M/VS-20ML Vari 16A/meters, 20A surge	170.95	139 ⁹⁵	
VS-35M Variable 25A ps/meters, 35A surge	238.95	189 ⁹⁵	
VS-50M Variable 37A ps/meters, 50A surge	330.95	259 ⁹⁵	
RM-35M 25A rack mt ps/meters, 35A surge	318.95	249 ⁹⁵	
RM-50M 37A rack mt ps/meters, 50A surge	354.95	279 ⁹⁵	
RM-60M 50A rack mt ps/meters, 55A surge	467.95	359 ⁹⁵	
12/115 200w solid state 12vdc-115vac inverter	79.95	59 ⁹⁵	
2412 9A 22-32vdc to 13.8vdc converter	73.95	59 ⁹⁵	

ASTRON - continued		Reg	Sale
2412-20 16A 22-32vdc to 13.8vdc converter	103.95	79 ⁹⁵	
AZDEN (AZD)		Reg	Sale
PCS-7500H 50w 6m FM Xcvr w/TTP mic	389 ⁹⁵		
PCS-7800H 50w 10m FM Xcvr w/TTP mic	389 ⁹⁵		
PCS-7000H 50w 2m FM Xcvr w/TTP mic	334 ⁹⁵		
PCS-7200 25w 220 FM Xcvr w/TTP mic	409 ⁹⁵		
PCS-7300H 35w 440 FM Xcvr w/TTP mic	439 ⁹⁵		
PCS-9600D 35w 440 FM Xcvr/9600 baud	649 ⁹⁵		
AZ-11 5w 10m FM HT/batt/cgr/TTP	379 ⁹⁵		
AZ-21A 5w 2m FM HT/batt/cgr/TTP	299 ⁹⁵		
AZ-61 5w 6m FM HT/batt/cgr/TTP	379 ⁹⁵		
AD-16 DC power cord for HT	9 ⁹⁵		
ARD-6M 6m HT gain antenna	34 ⁹⁵		
ARD-10M 10m HT gain antenna	39 ⁹⁵		
BP-11A Extra 5w battery	59 ⁹⁵		
LC-16 Soft case	19 ⁹⁵		
SDX-514W Speaker/mic	49 ⁹⁵		
DM-10 20 ohm headphones for HF radio	49 ⁹⁵		
HS-03 Boom mic/headphones for HF Xcvr	69 ⁹⁵		

AZIMUTH (AZI)		Reg	Sale
BP-3/7826 Nicads (3 AAA); 2 needed; ALT-6 Dm	\$ 7.95	3 ⁹⁵	
CA-2/7192 Vinyl carrying case; ALT-6 Dm	12.95	95¢	
DSK/7194 Stainless desk stand; ALT-6 Dm	15.95	1 ⁹⁵	
FML/7197 Flat stainless mtg plate; ALT-6 Dm	12.95	1 ⁹⁵	
PS-12/7822 AC power adapter/cgr; ALT-6 Dm	9.95	1 ⁹⁵	
RG-3/7830 Rain collector, self dump; ALT-6 Dm	49.95	24 ⁹⁵	
AWZ WAZ QSL library	19.95	14 ⁹⁵	
GC-24 Large LCD 24-hour clock	29.95	24 ⁹⁵	

B & K (B&K)		Reg	Sale
AUDIO TEST INSTRUMENT			
2005A RF generator	\$275.00	234 ⁹⁵	
CAPACITANCE METERS			
810A 200 pF to 20 mF capacitance meter	\$134.00	114 ⁹⁵	
815 Tester (cap/res/Hfe/diode/batt)	99.00	84 ⁹⁵	
820 .1pF to 1F capacitance meter	279.00	229 ⁹⁵	
830 200 pF to 200mF autoranging meter	325.00	259 ⁹⁵	
875A Digital LCR meter	199.00	169 ⁹⁵	
878 Universal hand-held LCR bridge	275.00	219 ⁹⁵	

COUNTERS		Reg	Sale
1803C 100 MHz frequency counter	\$209.00	169 ⁹⁵	
1806 100 MHz multi-function counter	249.00	214 ⁹⁵	
1807 1.3GHz 1 ppm frequency counter	299.00	259 ⁹⁵	
1823 175 MHz universal counter	399.00	339 ⁹⁵	
1856A 2.4 GHz 1 ppm multi-function ctr	499.00	399 ⁹⁵	
CRT RESTORER/ANALYZERS		Reg	Sale
480 CRT restorer/analyzer	\$739.00	629 ⁹⁵	
490 Tri Dynamic restorer/analyzer	1049.00	899 ⁹⁵	
DIGITAL PRODUCTS		Reg	Sale
DP-21 Digital logic probe	\$ 34.00	29 ⁹⁵	
DP-51 Digital probe	Dm	69 ⁹⁵	
DP-101 Digital pulsing probe	D	111.00	94 ⁹⁵

GENERATORS		Reg	Sale
3001 Audio generator	\$ 79.00	66 ⁹⁵	
3011B 2 MHz function generator/dig disp Dm	269.00	199 ⁹⁵	
3017A 2 MHz sweep/function generator	D	339.00	269 ⁹⁵
3022 Sweep/func gen w/freq counter	Dm	479.00	369 ⁹⁵
3026 5 MHz sweep/function gen w/dig disp D	629.00	499 ⁹⁵	
3030 .001 Hz-5 MHz sweep/function gen	D	865.00	699 ⁹⁵
3040 Universal func gen w/freq counter	D	1195.00	949 ⁹⁵

HIGH VOLTAGE PROBE		Reg	Sale
HV-44 Direct-reading 40kV DC probe	\$109.00	89 ⁹⁵	
ISOLATION TRANSFORMER		Reg	Sale
TR-110 Isolation transformer	\$219.00	189 ⁹⁵	
MULTIMETERS (ANALOG)		Reg	Sale
114 20,000 ohms/volt analog multimeter Dm	\$ 42.00	29 ⁹⁵	
114A 20,000 ohms/volt analog multimeter	42.00	39 ⁹⁵	
117 Pocket size analog multimeter	13.00		
214 30,000 ohms/volt analog multimeter Dm	55.00	39 ⁹⁵	
214A 30,000 ohms/volt analog multimeter	55.00	46 ⁹⁵	
300 Insulation tester	129.00	109 ⁹⁵	
MULTIMETERS (DIGITAL)		Reg	Sale
330 750A AC multi-function clamp meter	\$ 85.00	74 ⁹⁵	
340A 300A multi-function clamp-meter	109.00	89 ⁹⁵	
350A 1000A multi-function clamp-meter	145.00	124 ⁹⁵	

B & K - continued		Reg	Sale
366 600A AC/DC multi-func clamp meter	179.00	154 ⁹⁵	
388A Test Bench DMM, 0.5% accuracy	119.00	99 ⁹⁵	
389 Test Bench DMM, 0.25% accuracy	139.00	109 ⁹⁵	
390 Test Bench DMM, 0.1% accuracy	159.00	134 ⁹⁵	
391 Test Bench DMM, 0.05% accuracy	179.00	149 ⁹⁵	
2700 Credit-card size bargraph DMM	33.00	29 ⁹⁵	
2703A Tool kit DMM, basic model, 0.5%	39.00	34 ⁹⁵	
2704A Tool kit DMM w/cap/transistor/diode	59.00	49 ⁹⁵	
2706 Tool kit DMM, 2704A plus temperature	79.00	69 ⁹⁵	
2707 Tool kit DMM, 2704A plus logic & freq	89.00	76 ⁹⁵	
2831A Digital bench multimeter	299.00	249 ⁹⁵	
2832 3½-dig 0.5% lab multimeter	219.00	189 ⁹⁵	
2833 4½-dig 0.05% true RMS multimeter	400.00	339 ⁹⁵	
2835 3½-dig 0.5% bench type LCD DMM	270.00	229 ⁹⁵	
2860 3½-dig 0.5% ruggedized DMM	99.00	84 ⁹⁵	
2911 3½-dig 0.5% analog/bar meter	Dm	89.00	54 ⁹⁵
2912 3½-dig 0.3% analog/bargraph meter .D	149.00	119 ⁹⁵	

OSCILLOSCOPES		Reg	Sale
1422 20 MHz mini scope	1395.00	1099	
1443 40 MHz port scope/batt/case	D	1695.00	1349
1541C 40 MHz 6" dual trace scope	799.00	679 ⁹⁵	
2120 20 MHz dual trace oscilloscope	549.00	449 ⁹⁵	
2125 20 MHz dual time base oscilloscope	646.00	519 ⁹⁵	
2160 60 MHz dual trace delayed sweep	1099.00	889 ⁹⁵	
2190A 100 MHz three trace delayed sweep	1599.00	1359	
2260 60 MHz analog scope/cursors/readouts	1399.00	1169	
2522A Digital storage oscilloscope	1099.00	929 ⁹⁵	
2560 60MHz DSO, cursors/readouts/RS232	2395.00	2029	

POWER SUPPLIES		Reg	Sale
1604 Portable isolated AC supply	\$114.00	99 ⁹⁵	
1630 0-30V, 0-3A power supply	Dm	315.00	219 ⁹⁵
1646 0-16V, 0-10A power supply	Dm	499.00	369 ⁹⁵
1651 Power supply; (2) 0-24vdc, .5A; 5V, 4A	429.00	359 ⁹⁵	
1653 0-150V, 2A isolated AC ps	319.00	279 ⁹⁵	
1655 0-150V, 3A isolated AC ps/leak tester	529.00	449 ⁹⁵	
1686 High current DC power supply	199.00	169 ⁹⁵	
1688 3-14VDC, 25A non. power supply	299.00	259 ⁹⁵	
1705 0-30VDC, 0-1A LED readout ps	299.00	259 ⁹⁵	
1710 0-30VDC, 0-1A power supply	229.00	194 ⁹⁵	
1711 0-60VDC, 0-2A power supply	309.00	264 ⁹⁵	
1715 0-60VDC, 0-2A LED readout ps	379.00	324 ⁹⁵	
1730 0-30VDC, 0-3A power supply	315.00	269 ⁹⁵	
1735 0-30VDC, 0-3A LED readout ps	380.00	329 ⁹⁵	
1740 0-60VDC, 0-4A power supply	499.00	419 ⁹⁵	
1743 0-35VDC, 0-6A LED readout ps	499.00	419 ⁹⁵	
1746 0-16VDC, 0-10A power supply	499.00	419 ⁹⁵	
1760 (2) 0-30V, 2A; (1) 4-6.5V, 5A LED ps	649.00	549 ⁹⁵	

SEMICONDUCTOR TESTERS		Reg	Sale
510 Portable transistor tester	\$239.00	199 ⁹⁵	
520B Industrial transistor tester	399.00	339 ⁹⁵	
541 Component comparator	Dm	449.00	309 ⁹⁵
545 Circuit analyzer analog signature	2950.00	2499	
560A Programmable PC board tester	3500.00	2969	
AK-560A Software package for 560A	495.00	399 ⁹⁵	

TELEPHONE TEST INSTRUMENTS		Reg	Sale
1045A Telephone product tester	\$599.00	499 ⁹⁵	
1050 Telephone product analyzer	2260.00	1899	

VIDEO TEST INSTRUMENTS		Reg	Sale
1211D Portable color generator	\$235.00	199 ⁹⁵	
1249A NTSC generator w/RGB	569.00	489 ⁹⁵	
1251 NTSC signal generator	1195.00	999 ⁹⁵	
1260 Deluxe NTSC signal generator	1995.00	1699	

ACCESSORIES			
PR-28	HV multimeter probe w/std dual banana	\$ 69.00	59 ⁹⁵
PR-32	RF detector/demod scope probe w/BNC	69.00	59 ⁹⁵
PR-37G	Gray dlx 10:1 direct BNC probe .....Dm	54.50	39 ⁹⁵
PR-37R	Red dlx 10:1 direct BNC probe .....Dm	54.50	39 ⁹⁵

Other accs available on special order. B & K stocked only at Milwaukee. Call Ron Glisch for B & K.

Same Day Shipping—Use your Credit Card!

B & W COAX SWITCHES (B&W)

CSR-56 5-position, side connectors	\$ 51.50	49 ⁹⁵
CS-66 6-position, for desk/wall mounting	51.50	49 ⁹⁵

Note: Above switches provide grounding of unused terminals, & are supplied w/face plates & knobs.

LOW-PASS FILTERS

FL-10/1500 1.5-30 MHz, 1kw, 52 ohms	\$ 50.00	
FL-10/1500/70 1.5-30MHz/1kw/72 ohm ...Dm	55.00	14 ⁹⁵

ANTENNAS

AP-10 57" portable 40/20/15/10/6/2m ant ...	\$ 69.95	
AT-55 40/20/15/10m 55' trap antenna	79.95	74 ⁹⁵
AT-55K As above, but kit	69.50	49 ⁹⁵
AT-110 80/40/20/15/10m 110' trap antenna	89.50	84 ⁹⁵
AT-110K As above, but kit	76.95	69 ⁹⁵
AS-160 160/80/40/20m 137' trap dipole	149.50	139 ⁹⁵
AS-80 80/40/20m 78' trap dipole	115.75	109 ⁹⁵
AS-40 40/20/15/10m 40' trap dipole	149.50	139 ⁹⁵
AS-20 20/15/10m 23' trap dipole	115.75	99 ⁹⁵
AXS-160 160/30m 96' trap dipole	115.75	99 ⁹⁵
AXS-80 80/40/15m 64' trap dipole	115.75	99 ⁹⁵
AC-3.5-30 80-10m 8-band 90' dipole	198.00	179 ⁹⁵
AC-1.8-30 Continuous 1.8-30 MHz antenna ..	198.00	179 ⁹⁵
BWD-1.8-30 1.8-30 MHz 90' folded dipole	198.00	179 ⁹⁵
AV-25 80/40/30/20/15/10m 25' vertical .Dmf	143.50	89 ⁹⁵
AR-25 Radial kit for AV-25	26.95	14 ⁹⁵
ASW-5 75" portable 49-11m SWL ant ...Dmv	52.25	49 ⁹⁵
VS-300A 300w 160-10m ant tuner	111.00	89 ⁹⁵

BELDEN (BEL)**52 OHM COAXIAL CABLE**

8216 RG-174 (sub-miniature)	per ft.	26 ⁹⁵
8216	100 ft. Roll	37.29
8216	500 ft. Roll	129.87
8216	1000 ft. Roll	259.74
9201 RG-58 (solid center)	per ft.	20 ⁹⁵
9201	100 ft. Roll	29.74
9201	500 ft. Roll	109.89
9201	1000 ft. Roll	216.45
8240 RG-58U (solid center)	per ft.	26 ⁹⁵
8240	100 ft. Roll	38.20
8240	500 ft. Roll	131.00
8240	1000 ft. Roll	262.00
8259 RG-58AU (stranded center)	per ft.	29 ⁹⁵
8259	100 ft. Roll	43.00
8259	500 ft. Roll	137.00
8259	1000 ft. Roll	276.00
8219 RG-58AU (stranded, foam)	per ft.	33 ⁹⁵
8219	100 ft. Roll	57.25
8219	500 ft. Roll	155.00
8219	1000 ft. Roll	387.50
8262 RG-58C (non-contaminating)	per ft.	36 ⁹⁵
8262	100 ft. cut	32 ⁹⁵
8262	500 ft. Roll	173.00
8262	1000 ft. Roll	346.00
9258 RG-8X (stranded, foam)	per ft.	36 ⁹⁵
9258	100 ft. Roll	81.25
9258	500 ft. Roll	217.56
9258	1000 ft. Roll	490.00
8237 RG-8U	per ft.	64 ⁹⁵
8237	100 ft. Roll	102.00
8237	500 ft. Roll	390.00
8214 RG-8U (foam)	per ft.	59 ⁹⁵
8214	100 ft. Roll	101.00
8214	500 ft. Roll	452.00
8214	1000 ft. Roll	898.00
9913 RG-8U (low loss)	100 ft. Roll	113.00

72 OHM COAXIAL CABLE

8241 RG-59U (72 ohm, solid center)	per ft.	28 ⁹⁵
8241	100 ft. Roll	44.00
8241	500 ft. Roll	123.00
8241	1000 ft. Roll	246.00
8238 RG-11 (72 ohm, stranded center)	per ft.	79 ⁹⁵
8238	100 ft. Roll	124.32
8238	500 ft. Roll	470.64
8213 RG-11 (72 ohm, solid, foam)	per ft.	69 ⁹⁵
8213	100 ft. cut	59 ⁹⁵
8213	500 ft. Roll	360.00

ROTOR CABLE

8484 4-wire; 4-20 ga; U-105	per ft.	28 ⁹⁵
8484	100 ft. Roll	48.00
8484	500 ft. Roll	185.00
8484	1000 ft. Roll	370.00
8448 8-wire; 2-18, 6-22 ga; CD-45/HAM-IV	per ft.	46 ⁹⁵
8448	100 ft. Roll	103.75
8448	500 ft. Roll	412.50
8448	1000 ft. Roll	820.00
9405 8-wire; 2-16, 6-18 ga; HAM-IV/TX	per ft.	59 ⁹⁵
9405	100 ft. cut	54 ⁹⁵
9405	500 ft. Roll	585.00
9405	1000 ft. Roll	1167.50

ANTENNA WIRE

8000 No. 14 stranded ant wire	per ft.	20 ⁹⁵
8000	100 ft. Roll	30.50
8000	1000 ft. Roll	275.00

No. 8 ALUMINUM GROUND WIRE

8018 Multiples of 50 ft.	each	\$ 19.00
8018	500 ft. Roll	150.00

Note: All above roll pricing is for rolls as shown only; all other lengths, even if more than roll length shown or a multiple of roll length shown, are sold at the per ft. price.

FOAM COAX w/PL-259s ON BOTH ENDS

9349 3' RG-58AU foam	\$ 19.32	14 ⁹⁵
9350 15' RG-58AU foam	21.63	16 ⁹⁵
9347 20' RG-58AU foam, 1 PL-259	19.32	6 ⁹⁵
9352 50' RG-58AU foam	32.13	24 ⁹⁵
9354 50' RG-8U foam	60.90	44 ⁹⁵
9355 75' RG-8U foam	84.00	59 ⁹⁵
9356 100' RG-8U foam	101.85	79 ⁹⁵

BELMERIT (BLM)

DM-10 3 1/2-digit digital multimeter	\$ 19.95	
DM-10S 3 1/2-digit dig multimeter w/case Dmwf	24.95	19 ⁹⁵
DM-3000 Wide range digital multimeter	54.95	
DM-3050 Wide range dig multimeter/freq test	59.95	

BENCHER (BEN)

BY-1 Iambic keyer paddle w/black base	\$ 72.95	69 ⁹⁵
BY-2 Iambic keyer paddle w/chrome base	89.95	84 ⁹⁵
BY-3 Iambic keyer paddle, gold plated	249.95	199 ⁹⁵
BY-4 Iambic paddle/blk base/gold components	149.95	129 ⁹⁵
ST-1 Single lever keyer paddle, black base ..	72.95	59 ⁹⁵
ST-2 Single lever kyr paddle, chrome base ..	89.95	69 ⁹⁵
ST-3 Single lever keyer paddle, gold plated ..	249.95	199 ⁹⁵
ST-4 Sgl lever paddle/blk base/gold components	149.95	129 ⁹⁵
RJ-1 Dlx hand key w/navy knob/black base ...	69.95	
RJ-2 Dlx hand key w/navy knob/chrome base	79.95	
ZA-1A 3.5-30 MHz 1:1 balun	34.95	
HWK Balun hardware kit for 2" boom	8.95	
YA-1 1kw low pass filter	54.95	

BIRD (BIR)

43 Thru-line Directional wattmeter, SO-239s .	\$239.00	
4300-400 Peak reading conversion kit	115.00	
43P Peak reading directional meter, SO-239s .	359.00	
4431 Wattmeter, variable RF tap, SO-239s ...	421.00	
Elements (Table 1) 50H-1000H	each	80.00
Elements (Table 1) 2500H, 5000H	each	114.00
Elements (Table 1) 25-1000 MHz	each	65.00
Low-power elements (Table 2)	each	86.00

TABLE 1 Standard Elements

Frequency Bands (MHz)

Power Range	2-30	25-60	50-125	100-250	200-500	400-1000
5 watts	—	5A	5B	5C	5D	5E
10 watts	—	10A	10B	10C	10D	10E
25 watts	—	25A	25B	25C	25D	25E
50 watts	50H	50A	50B	50C	50D	50E
100 watts	100H	100A	100B	100C	100D	100E
250 watts	250H	250A	250B	250C	250D	250E
500 watts	500H	500A	500B	500C	500D	500E
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E
2500 watts	2500H					
5000 watts	5000H					

TABLE 2 Low-Power Elements

1 watt	Cat. No.	2.5 watts	Cat. No.
25-30 MHz	025-1	25-30 MHz	025-2
30-35 MHz	030-1	30-40 MHz	030-2
35-40 MHz	035-1	40-50 MHz	040-2
40-50 MHz	040-1	50-60 MHz	050-2
50-60 MHz	050-1	60-80 MHz	060-2
60-80 MHz	060-1	80-95 MHz	080-2
80-95 MHz	080-1	95-150 MHz	095-2
95-125 MHz	095-1	150-250 MHz	150-2
110-160 MHz	110-1	200-300 MHz	200-2
150-250 MHz	150-1	250-450 MHz	250-2
200-300 MHz	200-1	400-850 MHz	400-2
275-450 MHz	275-1	800-1000 MHz	801-2
425-850 MHz	425-1		
800-1000 MHz	801-1		

CC-1 Carrying case	43.00	
EC-1 Element case	33.00	
80F 5w dummy load w/type N female	72.00	59 ⁹⁵
80M 5w dummy load w/type N male	72.00	59 ⁹⁵
80B0 25w dummy load w/type N male QC	102.00	
80B5 50w dummy load w/type N male QC	146.00	
4273 1.5-35 MHz variable RF sig sampler* ...	123.00	
4273-100 For Bird equipment installation	133.00	
4275 20-1000 MHz variable RF sampler*	118.00	
*2 QC connectors required - not included		
4275-100 For Bird equipment installation	133.00	
4304A 25-1000 MHz 500w wattmeter	470.00	

QUICK CHANGE CONNECTORS (QC)

4240-050 UHF female (SO-239)	each	\$ 8.00
4240-179 UHF male (PL-259)	each	43.00
4240-062 Type N female	each	8.00
4240-063 Type N male	each, Δmwf	18.00
4240-125 BNC female	each	18.00
4240-132 BNC male	each, Δmwf	51.00

Other Bird items available on special order**BUCKMASTER (BUC)**

HamCall CD-ROM ham listings; IBM/Mac	\$ 50.00	
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BUTTERNUT (BUT)

HF-6VX 80/40/30/20/15/10m 26' vert ant	\$246.75	199 ⁹⁵
HF-9VX 80/40/30/20/17/15/12/10/6m vert ...	306.25	249 ⁹⁵
A17-12 17 & 12m kit for HF-6VX	54.25	49 ⁹⁵
CPK Counterpoise kit	61.25	54 ⁹⁵
MPS Mounting post sleeve		9 ⁹⁵
RMK-II Roof mounting kit w/radials	85.75	76 ⁹⁵
STR-II Radial kit only	54.25	49 ⁹⁵
TBR-160S 160m resonator for HF-6VX	89.25	79 ⁹⁵
HF-2V 80/40m 32' vertical	231.00	189 ⁹⁵
30-MRK 30m resonator for HF-2V	54.25	49 ⁹⁵
TBR-160S 160m resonator	89.25	79 ⁹⁵
HF-5B 2 el 20/17/15/12/10m butterfly beam	376.25	299 ⁹⁵
10-11 2 el butterfly beam; 10 & 11m Δmwf	166.25	79 ⁹⁵

CES (CES)

410 Personal Patch interconnect	\$250.00	169 ⁹⁵
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Reg Sale

COMET - continued

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SSI-68 Simplex autopatch	460.00	269 ⁹⁵
SDI-50 Dlx splx/dplx autopatch/rptr controller ..	760.00	399 ⁹⁵
CQ (CQX)		
1995 Amateur Radio Calendar	\$	9.95
1995 Radio Classics Calendar		9.95
Amateur Radio Almanac		19.95
Building and Using Baluns and Ununs		19.95
Buyers Guide		5.95
Contest Video Getting Started in Contesting ..		19.95
DXing Video Getting Started in DXing		19.95
Ham Sat Video Getting Started Amateur Satellites		19.95
Ham Video Getting Started in Ham Radio		19.95
Low McCoy on Antennas		15.95
Packet Radio Operator's Manual		15.95
Packet Video Getting Started in Packet Radio ..		19.95
Quad Antenna Book		15.95
Shortwave Propagation Handbook		19.95
Vertical Antenna Handbook		9.95
VHF How To Book		15.95
VHF Video Getting Started in VHF		19.95

CAMBRIDGE (CAM)

The Art of Electronics (book)

CIRCUIT WORKS (CIR)

Conductive Pen

CLOCKS

AEA World Clock	\$	25.00
BMI 972A 12" 12-hour wall clock		37.95
BMI 972AD 14" 12/24-hour wall clock		39.95
BMI 973A 12" 24-hour wall clock		59.95
MFJ 105B 24-hour quartz wall clock		19.95
MFJ 107B 24-hour digital clock		9.95
MFJ 108B 24/12-hour dual disp digital clock ..		19.95
MFJ 112 Deluxe world map clock		24.95
MFJ 114 Large LED 24-hour clock		39.95

COAX SEAL (UNV)

104 1/2" x 60" coax seal	\$	2.49
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COMET (CMT)

MOBILE ANTENNAS

B-10 2m/440 2.15db 12" cell look-alike ant ..	\$	38.95
B-10NMO 2m/440 2.15db 12" cell look-alike NMO		38.95
B-20 2m/440 2.15/5db 30" cell look-alike ant ..		56.95
B-20NMO 2m/440 2.15db/5db 30" cell look NMO		56.95
CA-28HR 10m 7' fold-over mobile ant ..Dmwv		69.95
CA-220MR 220 4.2db 3' 3" fold-over ant		49.95
CA-2405 2.4 GHz 7db 17" fg type N antenna ..		59.95
CA-HV 40/15/10/6/2m 5' 10" mobile ant		149.95
L-14 20m loading coil for CA-HV		36.95
CHL-21J 2m/440 0/2.15db 12" mob ant ....Dv		29.95
CHL-350 10/6m 0/2.15db fold-over 7' ant		79.95
CMW-202N 900 MHz 5.1db 18" type N ant		39.95
CX-224 2m/220/440 2.15/3.2/5.5db 42" mobile ..		82.95
CX-224NMO 2m/220/440 2.15/3.2/5.5db 42" NMO		82.95
FJ-15S 6m/2m/440 2.15/4.5/72.db 5' mobile ..		104.95
FL-7HA 40m 40" mobile antenna		82.95
FL-14HA 20m 37" mobile antenna		82.95
FL-28HA 10m 33" mobile antenna		82.95
FL-50HA 6m 33" mobile antenna		82.95
FL-62S 2m/440 3.5/6.2db 3' 5" mobile Dmwfv		79.95
FL-67S 2m/440 4.5/7.2db 4' 11" mob Dmwfv		96.95
FS-74B 440/1.2 black 5.1/7.2db 22" N mob ..		79.95
FS-92B 2m/440/1.2 2.1/4.1/6.8 23" type N ...		79.95
HA-4S 40/15/12/10m 4' 5" mobile ant		199.95
L-14HS 20m loading coil for HA-4S		39.95
HP-32 2m/440 3/5.5db 34" 350/250w ant		89.95
SB-2 2m/440 2.15/3.8db 18" mobile ant		35.95
SB-2NMO 2m/440 2.15/3.8db 18" NMO ant		35.95
SB-5 2m/440 3/5.5db 38" mobile antenna		58.95
SB-5NMO 2m/440 3/5.5db 38" NMO antenna ..		58.95
SB-7 2m/440 4.5/7.2db 4' 7" mobile ant		82.95
SB-7NMO 2m/440 4.5/7.2db 4' 7" NMO ant ...		82.95
SB-25 2m 4.1db 4' 8" mobile antenna		49.95
SB-25NMO 2m 4.1db 4' 8" NMO mobile ant ..		49.95
SB-44 440 5db 29" mobile antenna		44.95
SB-83 2m/440/cell 3/6/8.4db 35" type N ant ..		78.95

SB-94 2m/440/1.2 2.15/5.1/7.2db 24" N ant ..	72.95
SB-97 2m/440/1.2 3/6.8/9.6db 39" type N	84.95
SB-123 1.2GHz 7.2db 24" type N mobile ant ..	54.95
SB-214W 2m/220 3' 1.7/3.4db mob ant	62.95
WP-57 2m/440 2.15/5.2db 30w on glass ant ..Dm	129.95
WP-75B 440/1.2 4.9/6.5db 30w on glass BNC ....Dm	144.95
Z-750 2m/440 2.1/5.5db 39" theft resistant ..	66.95
Z-780 2m/440 4.5/7.2db 5' theft resistant ...	89.95

MOBILE MOUNTS, ETC

3D4M Mobile mt, 13' coax w/UHF connectors ..	\$	24.95
3D4N Mobile mt, 13' coax w/type N		28.95
3D5M Mobile mt, 16.5' coax w/UHF connectors ..		27.95
5D4N Roof mount, 13' coax w/type N		34.95
AD-10N N-NMO mount adapter		17.95
AD-15M UHF-NMO mount adapter		17.95
BMG-BB Med duty blk mag mt, BNC/BNC ...Dmf		39.95
BMG-M Med duty blk mag mt/UHF conn Dmwfv		42.95
CA-MS1 Mag mt only, no coax; add 3D4M, etc		29.95
CK-3M Dlx 2-step 10' cable w/UHF connectors ..		33.95
CK-3M5 Dlx 2-step 16.5' cable w/UHF connects		39.95
CK-5M Dlx 13' cable w/UHF conn ....Dmwfv		37.95
CK-5M5 Dlx 16.5' cable w/UHF conn ....Dmwfv		39.95
CK-5N Dlx cable assembly w/type N		43.95
GR-5M Dlx tnk lip mt w/ coax; matches SB		65.95
GR-5N Dlx N tnk lip mt w/ coax; matches SB ..		65.95
MG-SRB Med duty mag mt w/UHF/BNC Dmwfv		38.95
MG-SRM Med duty mag mt w/UHF conn ..Dmwfv		36.95
MS-3FVMM Std duty mag mt w/UHF connectors ..		43.95
MS-3FVNN Std duty mag mount w/type N		44.95
MS-5LXMM Hvy duty mag mt w/UHF connectors ..		57.95
MS-5LXNN Hvy duty magnet mount w/type N ..		61.95
RS-9 Trunk lip mount, no coax		13.95
RS-20 Gtr mt for small/mob ants, no coax		29.95
RS-21 Adj 360 degree hatch/tnk mt, no coax ..		29.95
RS-25 Adj pipe clamp mount, no coax		38.95
RS-80 Adjustable gutter mount, no coax		32.95
RS-81 Adj trunk/hatch mount, no coax		32.95
RS-820 Low profile trunk lip mount, no coax ..		38.95
RS-850 Lug rack/to 1.75" pipe mt, no coax ..		42.95
TS-1M Trunk lip mt w coax		45.95
TS-5M Low prof tnk lip mt w/dlx cable ....Dm		54.95
TS-103NN Trunk lip mt w/coax, type N ..Dmwfv		39.95
TS-106NN Dlx tnk lip mt/coax, type N ..Dmwfv		55.95
WS-1M Window clip mt w/UHF connectors		61.95
5D-FB Low loss 7.3mm (1/8") coax ....100m,Δm		199.95
5D-BNC Male BNC connector; 5D coax ..Δm		9.95
5D-NJC Female N connector; 5D coax ..Δm		7.95
10D-FB Low loss 13.1mm (1/2") coax ....100m,Δm		449.95
10D-NJC Female N connector; 10D coax ..Δm		9.95

BASE STATION ANTENNAS

CA-62DB 52-54MHz 6.5db 21.75' base ant ...	\$	159.95
CA-350DB 10/6m 2.15/6.5db 22' 7" ant		319.95
CA-712EF 440 9db 10' 5" base antenna		134.95
CA-1243E 440/1.2 GHz 6/8.4db 3' 4" type N ..		94.95
CA-1243Z 440/1.2 GHz 9.4/12.8db 7' type N ..		161.95
CA-ABC21 2m 3.4db 4' 7" base antenna		59.95
CA-ABC22A 2m 6.5db 9' 5" base/rptr ant		79.95
CA-ABC23 2m 7.8 db 13' 4" base/rptr ant		134.95
CA-F22GF 136-175 6db 8' 10" tunable ....T		149.95
CA-F72GF 440-470 6db 3' 6" tunable ant		129.95
CA-Super22 220 6.6db 8' 2" base ant		149.95
CFC-771 900MHz 4.5' 7.14db N base/rptr		97.40
CMR-241 2m/440 4.5/7.2db 6.5' rptr ant		169.95
CX-333 2m/220/440 6.5/7.8/9db 10.25' ant ..		219.95
CX-902 2m/440/1.2 6.5/9/9db 10' N ...Dmwv		189.95
CYA-1216E 1.2GHz 16el 16.6db 4' 5" N beam ..		139.95
DS-15 6m/2m/440/900/1.2 disccone antenna ..		129.95
FP-19 900 MHz 16db 7' 4" type N base/rptr ..		119.95
GP-3 2m/440 4.5/7.2db 5' 11" base/rptr ant ..		121.25
GP-6 2m/440 6.5/9db 10' 2" base/rptr ant ...		174.95
GP-9 2m/440 8.5/11.9db 17' 8" base/rptr		224.95
GP-9N 2m/440 8.5/11.9db 17' 8" N base/rptr ..		224.95
GP-15 6/2m/440 3/6/2/8.6db 8' base		169.95
GP-21/CA-1221S 1.2 14.8db 8.5' N base/rptr ..		189.95
GP-24 2.4GHz 12.4db 2' type N base/rptr		199.95
GP-93 2m/440/1.2 4.5/7.2/10db 5' 7" type N ..		149.95
GP-98 2m/440/1.2 6.5/9/13.5db 9' 8" N ant ..		229.95
GPX-2010 2m/440 9.5/13.2db 23' 4" base/rptr ..		395.95

NCG-1422B 2m/220 2.15/3.4db 3' 8" ..Dmwfv	119.50
PYA-913 900MHz 13el 15.8db 4' 8" type N beam ..	149.95

DUPLEXERS AND TRIPLEXERS

CF-142 1.3-150/200-480 600/400w UHF/leads ..	\$	74.95
CF-360A 1.3-30/50-470 600w UHF w/leads ..		74.95
CF-413A 440/1.2 500/200w N w/leads		74.95
CF-413B 440/1.2 500/200w N/UHF/N leads ..		74.95
CF-416A 2m/440 800/500w UHF w/leads		58.70
CF-416C 2m/440 800/500w N/UHF/N leads ..		58.70
CF-416W 1.3-250/400-1400 400/200w N/leads ..		84.95
CF-530 1.3-90/125-470 600w UHF w/leads ..		74.95
CF-4130A 440/1.2 500/200w N, no leads		69.00
CF-4160I 2m/440 800/500w UHF/UHF/N, no leads ..		52.25
CF-4160J 2m/440 800/500w SO-239, no leads ..		58.95
CF-4160K 2m/440 800/500w all UHF, no leads ..		52.25
CFX-324A 2m/220/440 600w UHF w/leads		99.95
CFX-324B 2m/220/440 600w UHF, no leads ..		95.00
CFX-431A 2m/440/900-1.2 N/UHF/N/N, leads ..		89.95
CFX-431B 2m/440/900-1.2 N/UHF/UHF/N, leads ..		89.95
CFX-514 HF/2m/440 800/800/500w UHF w/leads ..		84.95
CFX-514J HF/2m/440 800/800/500w UHF, no leads ..		79.95
CFX-4310B 2m/440/900-1.2 N/UHF/N/N, no leads ..		84.95
CFX-4310C 2m/440/1.2; Kenwood TM-71A/941A ..		84.95
CFX-5140 HF/6m/2m/440 800/800/500w UHF, no leads		84.95

HT AND HAND-HELD SCANNER ANTENNAS

CH-32 2m/440 1.75" BNC antenna	\$	33.95
CH-72S 2m/440 0/3.2db 15" BNC antenna		32.95
CH-720C 2m/440 semi-rigid 0/3.8db 18" BNC ..		37.95
CH-701X 2m/440/900 2/3.4/5.5db 19" BNC		54.95
CH-722SA 2m/440 3/5.5db BNC whip ant		44.95
CY-1205 1.2 GHz 11db 7" BNC HT beam		41.45
SH-55 2m/440 1.5/3.2db 15" BNC ant		32.95
SWR-2m/440/1.2 1.5/2.15/5.5db BNC ant ..		49.95

SWR/POWER METERS & MINIMETERS

CD-160H 1.6-60 MHz 2kw SWR/power ....Dm	\$	169.95
CD-270 140-525 MHz 200w SWR/power ...Dm		159.95
CM-120 1240-1300 MHz type N minimeter		89.95
CM-400 430-450 MHz minimeter		51.95
CM-400N 430-450 MHz N minimeter ....Dwf		55.50
CM-690 1.9-60 MHz 20/150w minimeter		75.95
CM-720 140-150/430-450 MHz minimeter		75.95
CM-720N 140-150/430-450 type N minimeter ..		79.95
CM-900 900-920 MHz type N minimeter		89.95
CM-1200 1240-1300 MHz N minimeter ....Dw		89.95
CMX-1 1.8-60 MHz 2000w SWR/pwr/rem head ..		209.95
CMX-2 1.8-200 MHz 200w SWR/pwr/rem head ..		199.95
CMX-3 140-525 MHz 200w SWR/pwr/rem head ..		189.95
EKS-3 10' remote head extension cable		23.95
NCG-2000 140-525MHz 200w SWR/pwr ..Dmwv		99.95

ACCESSORIES

CS-290P 1500MHz 150w N lightning protect ..	\$	39.95
CS-400P 500MHz 250w lightning protect		34.95
CSP-30 Mini speaker w/magnet mt		34.95
CS-80 Mini spkr w/mag mt, noise filt, mute ..		39.95
CSW-20 0-950MHz coax switch		57.60
CSW-20N 0-1300MHz N coax switch ..Dmwfv		99.95
HM-P2F Mini spkr/mic; Ali/Ico/Sta/Yae		32.95
HM-P2K Mini spkr/mic for Kenwood		32.95
HM-P4F Mini "HT" spkr/mic; Ali/Ico/Sta/etc ..		32.95
HM-P4K Mini "HT" spkr/mic for Kenwood		32.95
HM-P4Y Mini "HT" spkr/mic for Yaesu		32.95

Communications Specialists (COM)

SS-32P/SS-32PA Prog CTCSS encoder	\$	28.95
SS-32SMP Hybrid micro-sized encoder		27.95

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TE-64 64-tone CTCSS/burst switch encoder ..	79.95
TS-32P 32-tone CTCSS prog encoder/decoder ..	57.95
DTD-1 DTMF decoder ..	59.95

CONNECTORS

AMPHENOL COAX CONNECTORS (AMP)

83-1SP-1050 Male coax plug (PL-259)	\$ 1.81
83-1SP Silver plated coax plug (PL-259)	2.81
Van Gorden (VAN) silver plated teflon PL-259 ..	2.99
83-185 Reducer for RG-58 (UG-175) .....	.59
83-168 Reducer; RG-59/RG-8X (UG-176) ..	.55
83-1AP Right angle adaptor (UG-646)	5.55
83-1J Double female adaptor (PL-258)	3.19
83-1R Female chassis mt socket (SO-239) ..	1.95
83-1H Hood for in-line use (UG-106)	3.85
83-1T T-connector adaptor (M-358)	7.92
83-877 Double male adaptor	10.61
83-878 Single hole 1/2" chassis socket Δmwfv	2.51
31-002 BNC male connector for RG-58	3.28
31-012 BNC male connector; RG-59/RG-8X ..	3.73
31-221 BNC female chassis socket Δmwfv	1.92
82-24 Type N female chassis mt socket	4.48
82-61 Type N male connector for RG-8	7.13
82-64 Type N right angle adaptor Δmwfv	19.41
82-202-1006 Type N male; Belden 8214/9913 ..	6.83
82-209 Type N female in-line for RG-8	7.10
34025 Type N male connector for RG-58	6.11

AMPHENOL COAX ADAPTORS (AMP)

2900 SO-239 to BNC male adaptor	\$ 9.23
4400 SO-239 to type N male adaptor	12.76
34125 Type N female - PL-259 adapt	19.02
45250 Type N double male adaptor Δmwfv	16.19
31-28 BNC female to PL-259 adaptor Δmwfv	8.51
83-10 SO-239 to Motorola/phono plug Δmwfv	10.84

AIM COAX CONNECTORS & ADAPTORS (AIM)

25-7302 0-900MHz teflon insulator PL-259 ..	\$ 4.50
25-7351 Chassis mt SO-239 double female ..	5.60
25-7365 BNC female to SO-239	4.90
25-7420 BNC male to SO-239	3.80
26-8010 Type N double female	5.70
26-8011 Type N chassis mount	2.70
26-8015 N male to SO-239	7.90
26-8016 BNC female to N male	7.90
26-8017 BNC male to N female	7.90
27-8110 BNC female to RCA male	5.50
27-8120 BNC female to PL-259	3.70
27-8130 BNC double male	4.80
27-8140 BNC T; 2 female, 1 male	4.40
27-8142 BNC T, 3 male	8.90
27-8450 BNC chassis mt, 4 screw holes	3.50
27-8460 3/8" hole BNC chassis mt	1.90
27-8470 Dual BNC chassis mount	5.00
29-3855 BNC female to SMA male	11.50
29-4140 SO-239 to mini PL-259	5.50

SWITCHCRAFT MICROPHONE CONNECTORS (SWI)

480 .206" 3-cond mic plug (Collins)	Δm \$ 12.50
S-260 .206" 3-cond mic plug (Drake)	6.65

Switchcraft 1/4" Plugs w/Solder Terminals (SWI)

267 3-conductor, plastic handle	\$ 4.45
237 As above, but right angle plug Δm	5.15
260 3-conductor w/screw terminals	5.05
297 3-conductor, metal handle	5.35
250 2-conductor, plastic handle	3.00
220 As abv, w/screw terminals, rt angle plug	4.40
280 2-conductor, metal handle	4.45

SWITCHCRAFT PHONO-TYPE CONNECTORS (SWI)

3501MC Phono plug with cable clamps Δm	\$.90
3502 Shielded phono plug	1.75
3507 RF-type phono plug	2.55

Reg Sale

CONNECTORS - continued

Reg Sale

VANCO MICROPHONE CONNECTORS (VCO)

CBC-2 2-pin female mic plug	\$ 3.14
CBC-3 3-pin female mic plug	2.99
CBC-4 4-pin female mic plug	4.04
CBC-4P Panel mt 4-pin male	1.99
CBC-5 5-pin female mic plug	3.87
CBC-5P Panel mt 5-pin male	1.99
CBC-6 6-pin female mic plug	4.06
CBC-6P Panel mt 6-pin male	3.98
CBC-8 8-pin female mic plug	5.89
CBC-8P Panel mt 8-pin male	5.57

KENWOOD DIN PLUGS (KEN)

7-pin DIN plug	\$ 3.92
8-pin DIN plug	4.51
13-pin DIN plug	6.76

VANCO MINI PHONE PLUGS (VCO)

P-25 2.5mm sub-miniature phone plug	\$.99
P-35 3.5mm miniature phone plug .....	.99
P-12V Cig lighter plug w/leads	2.91

Connect Systems (CSY)

CS-700 Simplex interconnect	\$470.00	349 ⁹⁵
CS-800 Full duplex patch & repeater controller	470.00	349 ⁹⁵
CS-900 Simplex interconnect	470.00	349 ⁹⁵
Private Patch V Multi-mode interconnect	598.00	419 ⁹⁵
9801 Elec voice delay (EVD); Private Pch V	141.50	129 ⁹⁵
8200D Full duplex patch/repeater controller ..	713.00	499 ⁹⁵
CS-1688 Deluxe DTMF decoder/controller	213.00	189 ⁹⁵

COYNE (COY)

HAM RADIO TEST GENERATOR FOR MACINTOSH

MacHam no code Technician, includes Novice 2A	\$ 39.95	4 ⁹⁵
MacHam General	34.95	4 ⁹⁵
MacHam Advanced	34.95	8 ⁹⁵
MacHam Extra	34.95	
MacHam Radio Morse Code training software	39.95	

CROSS DEVICE (CRS)

STUF Coax connector waterproofing filler	\$ 4.50
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CROWN METAL (CRO)

SOLID BASE COPPERWELD ANTENNA WIRE

AN-122 100 feet No. 12	\$ 24.95	
AN-123 150 feet No. 12	29.95	
AN-124 250 feet No. 12	49.95	
AN-126 500 feet No. 12	84.95	79 ⁹⁵
AN-128 1000 feet No. 12	154.95	129 ⁹⁵
AN-142 100 feet No. 14	19.95	
AN-143 150 feet No. 14	24.95	
AN-144 250 feet No. 14	29.95	
AN-146 500 feet No. 14	54.95	
AN-148 1000 feet No. 14	104.95	89 ⁹⁵
AN-181 250 feet No. 18	14.95	
AN-182 500 feet No. 18	24.95	

CUSHCRAFT (CUS)

VHF/UHF FM BEAMS (Vertical polarization)

A148-3S 2m, 3 el wideband beam	\$ 46.01	43 ⁹⁵
A148-10S 2m, 10 el wideband beam	85.29	74 ⁹⁵
A148-20S 2 A148-10S vert stacked	232.96	186 ⁹⁵
A449-6S 440 MHz, 6 el, 3' boom, 10 db	59.28	56 ⁹⁵
A449-11S 440 MHz, 11 el, 4.5' boom, 13 db ..	83.00	74 ⁹⁵
A270-6S 2m/440, 3/3 el, 2.8' boom, 7.8 db ..	73.00	64 ⁹⁵
A270-10S 2m/440, 5/5 el, 6.17' boom, 10 db	99.00	79 ⁹⁵

FM VERTICAL STACKING KITS* (Adds 3 db)

A14-VPK Stacking kit for 2 A147-4 Δmwfv	\$ 61.00	19 ⁹⁵
A14-SK Harness only for 2 A148-3S	48.31	44 ⁹⁵
A148-VPKS Stacking kit for 2 A148-3S/10S ..	108.15	89 ⁹⁵
A148-SK Harness only for 2 A148-10S	48.31	44 ⁹⁵
A449-VPKS Stacking kit; 2 A449-6S/11S	65.11	62 ⁹⁵
A449-SK Harness only for 2 A449-6S/11S	48.31	44 ⁹⁵

*Prices are for stacking kits only

FM RINGOS - 1/2 Wave Verticals - 3.75 db

AR-10 10m FM Ringo, 1000w	\$ 70.72	62 ⁹⁵
AR-6 6m FM, 1000w	70.72	62 ⁹⁵
AR-2 2m FM, 1000w	49.92	39 ⁹⁵
AR-220 220 MHz FM, 500w	48.88	39 ⁹⁵

CUSHCRAFT - continued

Reg Sale

AR-450 440 MHz FM, 500w	48.88	39 ⁹⁵
AR-270 2m/440 MHz FM, 250w, 3.7/5.5db	87.73	69 ⁹⁵
AR-270B 2m/440 MHz FM base ant	127.50	99 ⁹⁵

RINGO RANGERS - FM Verticals - 6 db

ARX-2 2m FM Ringo Ranger	\$ 60.33	49 ⁹⁵
ARX-2B 2m FM Ringo Ranger II, 1000w	72.80	59 ⁹⁵
ARX-220B 220 FM Ringo Ranger II, 500w	72.80	59 ⁹⁵
ARX-450B 440 FM Ringo Ranger II, 500w	72.80	59 ⁹⁵
ARX-450BN 440 FM Ringo Ranger II w/type N	88.40	74 ⁹⁵

HIGH PERFORMANCE 2m/440 VERTICALS

ARX-270N 2m/440 9/12 db fg type N ant	\$273.36	209 ⁹⁵
ARX-270U 2m/440 9/12 db fg SO-239 ant	273.36	209 ⁹⁵

FM 4-POLES (less vertical support mast)

AFM-4DA 2m FM, 23' high, 6/9 db	\$148.05	119 ⁹⁵
AFM-24DA 220 MHz FM, 15' high, 6/9 db	131.25	99 ⁹⁵
AFM-44DA 440 MHz FM, 8' high, 6/9 db	114.45	89 ⁹⁵

TWIST, OSCAR BEAMS (Horiz/Vert Polarization)

A144-10T 2m, 10 el, 5' boom, 10 db Δmwfv	\$103.00	69 ⁹⁵
A144-20T 2m, 20 el, 10' boom, 12 db Δmwfv	148.00	99 ⁹⁵
A148-20T 2m 20el 10.8'bm 11.1db twist	126.00	99 ⁹⁵
22XB 2m 22el 19.3'bm 14db circ beam/relay	290.01	199 ⁹⁵
416TB 432 twist, 16el, 6'boom, 12db Δmwfv	121.00	89 ⁹⁵
738XB 432 38el 14.3'bm 15.5db circ w/relay	268.00	189 ⁹⁵
PS-4 Remote polarity switch, use 12vdc Δmwfv	150.01	99 ⁹⁵
A14T-MB Oscar mtg boom & bracket Δmf	49.00	34 ⁹⁵

BOOMER ANTENNAS

617-6B 6m Boomer, 6 el, 34' boom, 14 db	\$423.28	299 ⁹⁵
124WB 2m Boomer, 4 el, 4' boom, 10.2 db	72.81	64 ⁹⁵
13B2 2m Boomer, 13 el, 15' boom, 15.8 db	142.15	119 ⁹⁵
17B2 2m Boomer, 17 el, 31' boom, 18 db	246.48	199 ⁹⁵
26B2 2 13B2s vertically stacked	405.61	299 ⁹⁵
220B 220 Boomer, 17 el, 19' boom, 17 db	192.40	149 ⁹⁵
224WB 220 Boomer, 4 el, 3' boom, 10.2db	67.40	59 ⁹⁵
225WB 220 wideband Boomer, 15el, 10'bm, 15.5db	148.72	119 ⁹⁵
424B 432 Boomer, 24 el, 17.5' boom, 18 db ..	161.00	129 ⁹⁵

BOOMER STACKING KITS*

617-SK Harness, pwr divider for 2 617-6Bs ..	\$159.60	119 ⁹⁵
324-QK Quad stacking kit for 4 32-19s Δv	575.00	129 ⁹⁵
22-SK Harness, power divider; 2 13B2s	97.65	79 ⁹⁵
22N-SK Harness, pwr divider; 2 17B2s	159.60	119 ⁹⁵
26B2-VPK Vertical polar kit; 2 13B2s	210.00	159 ⁹⁵
220-SK Harness, power divider for 2 220Bs ..	97.65	79 ⁹⁵
220-QK Quad stacking kit for 4 220Bs Δf	390.00	99 ⁹⁵
PD-2 Power divider for 2 13B2s	48.31	44 ⁹⁵
PD-2N Power divider for 2 17B2s	91.35	79 ⁹⁵
PD-4 Power divider for 4 13B2s	60.91	54 ⁹⁵
PD-4N Power divider for 4 17B2s	113.40	89 ⁹⁵
PD-222 Power divider for 2 220 Boomers	48.31	44 ⁹⁵
PD-224 Power divider for 4 220 Boomers	60.91	54 ⁹⁵

*Prices are for stacking kits only

VHF/UHF BEAMS (Horizontal polarization)

A50-3S 6m, 3 el, 6' boom, 8 db, stainless hdwre	\$110.25	89 ⁹⁵
A50-5S 6m, 5 el, 12' boom, 10 db, stainless hdwre	181.65	139 ⁹⁵
A50-6S 6m, 6 el, 20' boom, 11db, stainless hdwre	296.11	229 ⁹⁵
A144-7S 2m, 7 el, 8' boom, 10 db	59.85	54 ⁹⁵
A148-10S 2m, 10 el wideband beam	85.29	74 ⁹⁵
A430-11S 430 MHz, 11 el, 4' boom, 13 db	87.15	76 ⁹⁵

HORIZONTAL STACKING KITS* (Adds 3 db)

A535-SK For 2 A50-3S/5S	\$ 48.31	44 ⁹⁵
A561-SK For 2 A50-6S	63.00	54 ⁹⁵
A17-SK For 2 A144-7S, 79" spacing	48.31	44 ⁹⁵
A11-SK For 2 A144-11, 79" spacing Δwfv	45.00	14 ⁹⁵
A148-SK Harness only for 2 A148-10S	48.31	44 ⁹⁵
A41-SK For 2 A430-11S, 26" spacing	48.31	44 ⁹⁵

*Prices are for stacking kits only

CUSHCRAFT/SIGNALS MOBILE ANTENNAS

CS-28M 10m magnet mt antenna	\$ 64.00	59 ⁹⁵
CS-50 6m 3/4" hole mt 3 db antenna	55.00	49 ⁹⁵
CS-50M 6m magnet mt 3 db antenna	64.00	59 ⁹⁵
CS-50T 6m trunk lip mt 3 db antenna	64.00	59 ⁹⁵
CS-1147M 2m 1/4 wave magnet mt antenna ..	42.00	39 ⁹⁵
CS-147 2m 3/4" hole mt 3 db antenna	55.00	49 ⁹⁵
CS-147M 2m magnet mt 3 db antenna	64.00	59 ⁹⁵
CS-147T 2m trunk lip mt 3 db antenna	64.00	59 ⁹⁵
CS-147A 2m coil & whip only	43.00	36 ⁹⁵

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CUSHCRAFT - continued

Reg Sale

DRSI - continued

Reg Sale

DIAMOND - continued

Reg Sale

CS-220 220 3/4" hole mt 3 db antenna	55.00	49 ⁹⁵	Radio cable .....Dmfv	9.95	7 ⁹⁵	DP-SPM/5D Hvy duty mag mt, cbl; 45" max Dmwfv	\$ 45.95	39 ⁹⁵
CS-220M 220 magnet mt 3 db antenna	64.00	59 ⁹⁵	RS-232 cable .....Dmwfv	12.95	9 ⁹⁵	DP-SPM/58U Hvy mag mt w/RG-58U; 45" max	43.95	
CS-220T 220 trunk lip mt 3 db antenna	64.00	59 ⁹⁵				DPK-4NM-M Hvy mag mt, Yaesu N, 45" max ..	52.95	
CS-1450M 440 1/4 wave magnet mt antenna ..	42.00	39 ⁹⁵	DAIWA (DAI)			DPK-4NM-N Hvy dty mag mt, cbl, N, 45" max	59.95	
CS-450 440 3/4" hole mt 5 db antenna	55.00	49 ⁹⁵	CS-201 2-position 600 MHz coax switch	\$ 25.95		DPK-5NM Hvy duty mag mt, cbl, N, 45" max ... Df	56.95	44 ⁹⁵
CS-450M 440 magnet mt 5 db antenna	64.00	59 ⁹⁵	CS-401 4-position 800 MHz coax switch	139.95	109 ⁹⁵	FE-5M Two-stage coax & SO-239 mtg group ..	40.95	
CS-450T 440 trunk lip mt 5 db antenna	64.00	59 ⁹⁵	CN-101 1.8-150MHz SWR/power meter/light ..	119.95	89 ⁹⁵	GLP-5 UHF base mtg group hrdwr; mini coax	10.45	
CS-450A 440 coil & whip only	43.00	36 ⁹⁵	CN-103M 140-525MHz SWR/power meter	124.95	94 ⁹⁵	GLP-5N UHF mtg grp hrdwr; mini coax, Yae N	11.45	
CS-270M 2m/440 3.7/6 db magnet mt ant ...	86.67	72 ⁹⁵	CN-410M 3.5-150MHz 15/150w mob meter ...	109.95	89 ⁹⁵	GLP-58 UHF base mounting group hardware ..	10.45	
CS-270A 2m/440 coil & whip only	57.67	49 ⁹⁵	CN-460M 140-450MHz 15/150w mob meter ..	109.95	89 ⁹⁵	K-200 Folding hatch/tkn mt; NR/SG ants	43.95	

MOUNTS ONLY FOR ABOVE MOBILE ANTENNAS			DP-820 140-525MHz dig SWR/power meter ..	315.95	249 ⁹⁵	K-200KM Folding hatch/tkn mt/coax; NR/SG ..	73.95	
CS-MG Magnetic mount	\$ 29.00		DP-830 1.8-150/140-525 digital SWR/power	401.95	319 ⁹⁵	K-300 Folding gutter mt; NR/SG antennas	39.95	
CS-TL Trunk lip mount	29.00		NS-660PA 1.8-150 30/300/3kw PEP SWR/pwr	249.95	199 ⁹⁵	K-300KM Folding gutter mt w/coax; NR/SG	67.95	

PORTABLE ANTENNAS			DAVIS (DAV)			K-300M Gutter mt w/cable; NR/SG ants	83.95	
BN-220RC 220 2" BNC duck; lcom/Yae ....Dm	\$ 19.00	6 ⁹⁵	7400 Perception II indoor WX unit	\$150.00	129 ⁹⁵	K-400 Hatch/trunk mt; NR/SG antennas	41.95	

PORTABLE ANTENNAS FOR KENWOOD			7415 Wizard II-S weather station	150.00	129 ⁹⁵	K-400K 3/8M Trunk mount w/cable; 3/8-24	78.95	
TK-220B 220 6" TK duck for Kenwood .....Dm	\$ 17.00	4 ⁹⁵	7425 Wizard III weather station	195.00	169 ⁹⁵	K-400M Hatch/trunk mt w/cable; NR/SG ants	82.95	
TK-440B 440 6" TK duck for Kenwood .....Dm	17.00	4 ⁹⁵	7440 Monitor II weather station	395.00	349 ⁹⁵	K-400NMO Dlx hatch/trunk mt w/cable; NMO	67.95	

SKYWALKER HF BEAMS			7852 Rain Collector II, 0.01"	75.00	69 ⁹⁵	K-540 Mirror/luggage rack mount	39.95	
40-2CD 40m, 2 el, 23' boom, 5.5 db	\$625.80	429 ⁹⁵	7859 External temp/humd Sensor II; 7440 ..	125.00	109 ⁹⁵	K-540KM Mirror/luggage rack mt w/coax	67.95	
20-4CD 20m, 4 el, 32' boom, 10 db	625.80	429 ⁹⁵	7862 Weatherlink IBM interface/software....	165.00	139 ⁹⁵	K-550 Luggage mt; new mini vans (use GLP)	51.95	
20-3CD 20m, 3 el, 20' boom, 8 db	437.85	319 ⁹⁵	7866 Weatherlink Mac interface/software ...	165.00	139 ⁹⁵	K-550KM Luggage mt w/SO-239 base/coax ...	73.95	
15-4CD 15m, 4 el, 20' boom, 10 db	353.87	249 ⁹⁵	7867 Weatherlink IBM conversion kit	40.00		K-600M Tilt angle trunk mt w/cable	72.95	
15-3CD 15m, 3 el, 14' boom, 8 db	304.51	219 ⁹⁵	7868 Weatherlink Mac conversion kit	40.00		K-600N Tilt angle tnk mt w/type N, cable	78.95	
10-4CD 10m, 4 el, 16' boom, 10 db	299.25	214 ⁹⁵	7870 Modem adapter for 7862/7866	6.00		K-600P Tilt angle trunk mt w/cable, Yaesu N	76.95	
10-3CD 10m, 3 el, 10' boom, 8 db	232.05	169 ⁹⁵	7873 Cig lighter power cord	9.00		MCR-L Mag mt HT base/retractable coax/BNC	55.95	
TEN-3 10m, 3 el, 8' boom, 8 db	150.15	119 ⁹⁵	7876 4-conductor 40' extension cable	18.00		MCR-M Mag mt HT base w/coax/tiltable BNC	47.95	

MULTIBAND VERTICAL ANTENNAS			7878 6-conductor 40' extension cable	22.00		NMO-UHF Adapter to NMO; not for SG, 45" max	23.95	
AV-5 80/40/20/15/10m 25' vertical	\$218.41	169 ⁹⁵	7880 8-conductor 25' junction box cable ...	15.00		Larsen PO-K Roof mt, coax; NR/SG ants, 45" max ..	24.00	
AV-3 20/15/10m 14' vertical	121.68	99 ⁹⁵	7881 8-conductor 50' junction box cable ...	25.00		Larsen PO-TLM Tnk mt, coax; NR/SG ants	27.30	
AP-8A 80-10m 8-band ruggedized vertical ...	289.13	219 ⁹⁵	7882 8-conductor 100' junction box cable ..	45.00		SPM-35 Hvy duty mag mt, cable, 45" max	45.95	
APR-18A Radial kit	67.60	64 ⁹⁵	7890 Mast mount anemometer	16.00				
R-5 20/17/15/12/10m half wave vert	382.01	279 ⁹⁵	7520 Stand alone 0.01" rain gauge/elec ctr ..	95.00	89 ⁹⁵			
R-7 40/30/20/17/15/12/10m vertical	510.01	379 ⁹⁵						

ROTATABLE DIPOLES			DIAMOND (DIA)			BASE STATION ANTENNAS		
D-3 20/15/10m World Ranger dipole	\$243.60	179 ⁹⁵	METERS			CP-4A 40/20/15/10m 11' 200w PEP vert ...Dmw	\$259.95	149 ⁹⁵
D-3W 30/17/12m rotatable dipole	248.85	189 ⁹⁵	SX-100 1.6-60 MHz 30/300/3kw PEP meter ...	\$167.95	157 ⁹⁵	CP-6 80/40/20/15/10/6m 15' 200w PEP vert ....Dw	324.95	199 ⁹⁵
D-4 40/20/15/10m World Ranger dipole	330.75	249 ⁹⁵	SX-200 1.8-200 MHz 5/20/200w PEP meter ..	136.95	126 ⁹⁵	D-130J 25-1300 MHz 200w discone ant	101.95	94 ⁹⁵
D-40 40m World Ranger dipole	296.11	219 ⁹⁵	SX-400 140-525 MHz 5/20/200w PEP meter ..	157.95	147 ⁹⁵	DP-GH62 6m 6db 21' base antenna	157.95	147 ⁹⁵

MULTIBAND BEAM ANTENNAS			SX-600 Dual band 1.8-160/140-525 200w PEP meter	262.95	239 ⁹⁵	F-22A 2m 6.7db 10.5' base antenna	114.95	104 ⁹⁵
A-3S 20/15/10m, 3el, 14'bm, 8db, stainless hdwre	\$496.62	349 ⁹⁵	SX-1000 1.8-160/430-1300MHz 200w PEP meter ..	293.95	269 ⁹⁵	F-22J 143.5-146.5MHz 6.7db 10.5' base ant	114.95	104 ⁹⁵
A-743 40m or 10 MHz add-on kit; A-3/A-3S	155.03	129 ⁹⁵	SX-9000 1.8-160/430-1300MHz auto mtr ..Df	299.95	249 ⁹⁵	F-23A 2m 7.8db 15' base antenna	172.95	162 ⁹⁵
A-4S 20/15/10m, 4el, 18'bm, 9db, stainless hdwre	596.55	419 ⁹⁵				F-23C1 148-154MHz 7.8db 15' comm base ..	183.95	159 ⁹⁵
A-744 40m or 10 MHz add-on kit; A-4/A-4S	155.03	129 ⁹⁵				F-23J 143.5-146.5MHz 7.8db 15' base ant ...	172.95	162 ⁹⁵
A-3WS 17 & 12m, 3 el, 14' boom, 8 db	390.31	289 ⁹⁵				F-142A 220 MHz 5.5db 6' base antenna	136.95	124 ⁹⁵
A-103 30m add-on kit for A-3WS	154.91	129 ⁹⁵				F-718A 440 11.5db 15' type N base antenna	246.95	226 ⁹⁵
ASL-2010 13.5-32MHz 8el 18' bm 6.4db LP ..	828.46	569 ⁹⁵				F-718C2 460-472MHz 11.5db 15' N comm ...	261.95	239 ⁹⁵
AFB-2 160-10m 9-band balun	60.00	49 ⁹⁵				F-718J 428-442MHz 11.5db 15' N base ant ...	246.95	226 ⁹⁵

LIGHTNING ARRESTORS			MOBILE ANTENNAS			F-718L 420-430MHz 11.5db ATV N base ant ..	246.95	219 ⁹⁵
LAC-1 SO-239/PL-259 coax arrestor	\$ 12.60		CR-214S 2m/220 2.1/3.4db 37" mobile ant ..	\$ 62.95	57 ⁹⁵	F-1230A 1.2GHz 13.5db 10.5' type N base ant .	178.95	164 ⁹⁵
LAC-2 SO-239/SO-239 coax arrestor	12.60		CR-224A 2m/220 5/6db 69" mobile antenna	109.95	99 ⁹⁵	U-200 440/1.2GHz 8.3/11.7db 6' N base ant .	141.95	129 ⁹⁵
LAC-4 200w SO-239 gas tube arrestor	42.64	39 ⁹⁵	CR-320A 2m/220/440 2.15/3.8/5.5db 36"	98.95	93 ⁹⁵	U-300A 440/1.2GHz 8.6/13.2db 8.3' N base ant .	178.95	159 ⁹⁵
LAC-4H 2kw SO-239 gas tube arrestor	46.80	42 ⁹⁵	NR-72BNMO Black 2m/440 2.15db 14" NMO ..	46.95	44 ⁹⁵	U-5000A 2m/440/1.2GHz 4.5/8.3/11.7db 6' N	167.95	157 ⁹⁵
LAC-4N 200w type N gas tube arrestor	55.12	49 ⁹⁵	NR-73BNMO Blk 2m/440 2.15/5.5db 34" NMO	62.95	57 ⁹⁵	V-2000A 52-54MHz/2m/440 2.1/6.2/8.4db 8.3'	172.95	162 ⁹⁵
LAC-4NH 2kw type N gas tube arrestor	57.20	52 ⁹⁵	NR-124 1.2GHz 8.4db 25" type N mobile ant .	66.95	61 ⁹⁵	X-50A 2m/440 4.5/7.2db 5.6' base antenna ..	125.95	115 ⁹⁵
LC-2 Extra 200w cartridge for LAC-4/4N	17.85		NR-140A 220 4db 37" mobile antenna	60.95	55 ⁹⁵	X-200A 2m/440 6/8db 8.3' base antenna	167.95	157 ⁹⁵
LC-2KW Extra 2kw cartridge for LAC-4H/4NH	19.95		NR-770HA 2m/440 3/5.5db 40" mobile ant ...	62.95	57 ⁹⁵	X-300A 2m/440 6.5/9db 10.2' base ant	183.95	173 ⁹⁵
5VB Vinyl connector boots .....pack of 5	12.60		NR-770HMO 2m/440 3/5.5db 40" NMO mobile ..	64.95	59 ⁹⁵	X-500HNA Hvy duty 2m/440 8.3/11.7db 17.8' Nant..	269.95	249 ⁹⁵

DC SALES (DCS)			SG-7000A 2m/440 2.15/3.8db 19" mobile	73.95	68 ⁹⁵	X-510MA 2m/440 8.3/11.7db 17.2' base ant ..	219.95	199 ⁹⁵
Tenna Hitch Antenna mount for trailer hitch ..	\$ 32.95		SG-7500A 2m/440 3.5/6db 41" mobile ant ...	86.95	81 ⁹⁵	X-510NA 2m/440 8.3/11.7db 17.2' type N ant .	219.95	199 ⁹⁵
DRSI (DRS)			SG-7900A 2m/440 5/7.6db 62" mobile ant ...	124.95	114 ⁹⁵	X-510NJ 143.5-146.5/428-442MHz 17.2' N ...	219.95	189 ⁹⁵
M-2400 2400 baud VHF modem; PCPA1/3 .Dmv	\$149.95	89 ⁹⁵	TG-509 2m/440 2.1/5.5db 34" glass mt ant ..	199.95	179 ⁹⁵	X-700HA 2m/440 9.3/13db 24' base ant	439.95	399 ⁹⁵
			RH-77CA 2m/440 15" BNC rubber gain ant ...	34.95	32 ⁹⁵	X-2200A 2m/220 6/7.8db 11.5' base ant	183.95	173 ⁹⁵
			RH-205 2m 3/4 wave telescopic HT antenna ...	27.95		X-3200A 2m/220/440 6/7.8/8db 10' base	241.95	221 ⁹⁵
			RH-951 2m/440/1.2GHz 15" BNC rubber ant ..	57.95	52 ⁹⁵	X-6000A 2m/440/1.2 6.5/9/10db 10.5' N	219.95	199 ⁹⁵



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Diamond - continued

Reg Sale

EIMAC - continued

Reg Sale

HEIL (HEI)

Reg Sale

MX-37N HF-440/1.2 100/50w type N duplexer	60.95
MX-72D HF-2m/440 400/150/100w duplexer	54.95
MX-72DN As MX-72D, w/type N on 440	62.95
MX-72H As MX-72D, w/12" cables	58.95
MX-72N As MX-72D, type N on 440, 12" cables	58.95
MX-214 2m/220 150/100w w/12" cables	73.95
MX-324 2m/220/440 triplexer	115.95
MX-2000 HF-6m/2m/440 400/400/250w triplexer	102.95
MX-3000 HF-2m/440/1.2 400/200/100w triplexer	99.95
MX-3000D As MX-3000, no cables	99.95
MX-3000DN As MX-3000, type N on 440, 1.2	99.95
MX-3000N As MX-3000, type N, 12" cables	99.95

CA-23R DC-1GHz 200w N lightning protect Dmwf	\$ 39.95
CA-35R DC-500MHz 400w lightning protect	36.95
CX-210A 1.5kw DC-1000MHz coax switch	51.95
CX-210N 1.5kw DC-1500MHz N coax switch	93.95
DL-30N 15/100w peak 0-500MHz N dummy	49.95
HB-100 Desk mount bracket for HT	44.95
HB-400 HT air vent dash mount	19.95
HB-450 HT adjustable air vent dash mount	69.95
HB-500 Remote head air vent dash mount	22.95
HB-650 HT door mt; side window/glove box	69.95
SM-505KTS Spkr/mic for Kenwood TR-2500	29.95
SW-2 2-pos 0-500MHz coax switch	28.95

DSI-IBM-N Novice Class License software	49.95
DSI-IBM-T Technician Class License software	44.95
DSI-IBM-NC No Code Tech Class License software	59.95
DSI-IBM-G General Class License software	44.95
DSI-IBM-A Advanced Class License software	59.95
DSI-IBM-E Extra Class License software	59.95

D-500 512 MHz 8-digit counter - 1 PPM	\$149.95
D-510A 1 GHz 8-digit counter - 1 PPM	179.95
D-612 1.2 GHz 9-digit counter - .1 PPM	259.95
D-1200 1.2 GHz 9-dig .1 PPM ctr/audio mult	299.95
AC-12 9vdc adaptor	8.95
AM-12 10X/100X audio multiplier	39.95
AM-500X X10/X100 audio multiplier	69.95
B-12 Dry cell holder, switch for D-612	10.95
BAC-5 Nicad batt pack for D-500/D-510A	29.95
BAC-12 Nicad batt pack; D-612/D-1200	34.95
RF-500X Inline RF sampler, 250w maximum	39.95
T-1200 21" BNC telescopic antenna	8.95

R-8 1290 Shortwave receiver	\$999.00
R-8A Shortwave receiver	1099.00
1590 35-55, 108-174 MHz VHF converter	209.00
1591 Interface software for computers	59.00
MS-8 1592 Speaker	49.00
7850 R-8 technical manual	39.95
SW-8 Shortwave receiver	699.00

TX-146 2m 50w 40db 3-stage helical filter	\$ 89.95
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3-500Z	\$183.00
3CX800A7	412.00
3CX1200A7	665.00
4CX250B/7203	131.00
8873	458.00



Same Day Shipping... Call Toll Free and use your Credit Card!

Hi! I'm Jim, WB9LSR... Ask about late breaking "Hot Deals", Latest Sale Prices, Monthly Specials, Coupons, etc. 1-800-558-0411

8874/3CX400A7	415.00
8875	499.00
8877/3CX1500A7	935.00

Also see TUBES

VT-14 2m Ventenna 3' 2.6 db base ant	\$ 49.95
VT-22 220 Ventenna 25" 2.6 db base ant	49.95
VT-27 2m/440 Ventenna base antenna	74.95
VT-44 440 Ventenna 14" 2.6 db base ant	49.95
VT-15S Scanner Ventenna 3' 2.6 db base	49.95
VT-SWL SWL Ventenna 3' 20db active rcv Δmv	129.95

SS-100 Super slide mount w/ant plug	\$ 72.26
SS-101 Extra base for SS-100	29.75

DX-VIII 80/40/20/15/12/10/6/2m, 31.5'	\$259.00
(SYN) 100' 3/8" black double braided rope	6.95
DX-VI 40/20/17/15/12/10m 21.5', rigid	269.00
DX-IV 160/80/40/20m 45'; needs 350' guy	399.00
(SYN) 350' 3/8" black double braided rope	39.95
Titan DX 80/40/30/20/17/15/12/10m, 25'	289.00

RT-424 4.5' roof-top tower, 8 sq ft 85 mph	\$144.95
RT-832 8' roof-top tower, 8 sq ft 85 mph	205.45
RT-936 9' roof-top tower, 28 sq ft 85 mph	356.00
RT-1832 17.5' roof-top tower, 12 sq ft 85 mph	493.25
LB-3755 Set of 8 3/4 x 5" lag bolts	7.95
RA-6024 24" side arm for roof tower	59.50
RA-6048 48" side arm for roof tower	76.50
M-1330A 30' alum twr 12 sq ft/Hazer/10' mast T	1539.56
M-1340A 40' alum twr 12 sq ft/Hazer/10' mast T	1744.56
M-1840A 40' alum twr 16 sq ft/Hazer/10' mast T	2047.64
M-1850A 50' alum twr 16 sq ft/Hazer/10' mast T	2292.64
M-1860A 60' alum twr 15 sq ft/Hazer/10' mast T	3195.00
M-1870A 70' alum twr 15 sq ft/Hazer/10' mast T	3485.00
LR-8400 Lightning rod kit (complete)	148.95
CW-2540 25' #4 bare copper ground wire	17.25
CW-5040 50' #4 bare copper ground wire	34.50
CW-7540 75' #4 bare copper ground wire	51.75
CW-1040 100' #4 bare copper ground wire	69.00
MC-10 Mast clamp; 2 required	24.95
H-2 175 lb load 12 sq ft HD aluminum Hazer	339.95
H-3 150 lb load 8 sq ft std aluminum Hazer	245.95
H-4 200 lb load 16 sq ft galv steel Hazer	326.95
M-1049 9' 1.92" OD galv steel mast	56.00
MA-1049 9' 1.92" OD aluminum mast	64.95
MA-1050 5' 1.92" OD aluminum mast	51.50
MA-2069 9' 2.376" OD aluminum mast	96.00
MA-5050 5' 1.33" OD aluminum mast	34.95
ML-2500 Messenger line kit; Rohn towers	65.60
TB-25 Thrust bearing (2 sealed bearings)	79.95

All GLEN MARTIN items are shipped PREPAID (Glen Martin's expense) direct to you from the factory (48 states). We prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your order. Please allow sufficient delivery time. Most truck lines will not unload towers, so please be sure to have enough manpower and/or equipment on hand.

1043 Signal Hunter 10m DF ant	Δmw \$ 55.00
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Cosmopolit Port AM/FM/SW/LW Rcvr	Dwfv \$249.95
Yacht Boy 206 Port AM/FM/SW/LW Rcvr	Dmwfv 139.95
Yacht Boy 220 Port AM/FM/SW/LW Rcvr	Dm 129.95
Yacht Boy 230 Port AM/FM/SW/LW Rcvr	Dm 199.95
Yacht Boy 235 Port AM/FM/SW/LW Rcvr	Dmwfv 159.95
Satellit 700 AC/DC/batt AM/FM/SW/LW Rcvr	699.95
Traveller II Port AM/FM/SW/LW Rcvr/clock	109.95
Yacht Boy 305 Portable AM/FM/SW/LW Rcvr	149.95
Yacht Boy 400 Portable AM/FM/SW/LW Rcvr	249.95

PCI-4000/M Multi-mode clover unit; IBM	m \$795.00
ST-8000 HF modem	m 3495.00

AD-1-I Adapter cord for Icom	13.00
AD-1-K Adapter cord for Kenwood	13.00
AD-1-Y Adapter cord for Yaesu	13.00
BM-5-4 Boom mic/single headset (HC-4)	64.90
BM-5-5 Boom mic/single headset (HC-5)	64.90
BM-5-4-I Bm mic/single headset; Icom (HC-4)	69.90
BM-5-4-K Bm mic/single headset; Kenwood (HC-4)	69.90
BM-5-4-Y Bm mic/single headset; Yaesu (HC-4)	69.90
BM-5-5-I Bm mic/single headset; Icom (HC-5)	69.90
BM-5-5-K Bm mic/single headset; Kenwood (HC-5)	69.90
BM-5-5-Y Bm mic/single headset; Yaesu (HC-5)	69.90
BM-10-4 Boom mic/headset (HC-4)	71.90
BM-10-5 Boom mic/headset (HC-5)	71.90
BM-10-4-I Boom mic/headset; Icom (HC-4)	85.90
BM-10-4-K Boom mic/headset; Kenwood (HC-4)	85.90
BM-10-4-Y Boom mic/headset; Yaesu (HC-4)	85.90
BM-10-5-I Boom mic/headset; Icom (HC-5)	85.90
BM-10-5-K Boom mic/headset; Kenwood (HC-5)	85.90
BM-10-5-Y Boom mic/headset; Yaesu (HC-5)	85.90

FS-1 Foot switch	24.95
HS-1 Hand switch	19.95
HC-4 DX'ers 'dream machine' mic element	28.90
HC-5 Mic element for Icom SM-5/SM-6	28.90
HM-10-4-I Microphone for Icom (HC-4)	85.90
HM-10-4-K Microphone for Kenwood (HC-4)	85.90
HM-10-4-Y Microphone for Yaesu (HC-4)	85.90
HM-10-5-I Microphone for Icom (HC-5)	85.90
HM-10-5-K Microphone for Kenwood (HC-5)	85.90
HM-10-5-Y Microphone for Yaesu (HC-5)	85.90
HM-10-Dual-I Microphone for Icom	131.90
HM-10-Dual-K Microphone for Kenwood	131.90
HM-10-Dual-Y Microphone for Yaesu	131.90
MA-1 Clamp and arm for HM-10	49.95
TB-1 Table base mic stand for HM-10	12.95
B-4 Microphone boom (HC-4)	Δwfv 41.90
B-5 Microphone boom (HC-5)	Δmwv 41.90
B-4-I Microphone boom; Icom (HC-4)	Δmwfv 47.90
B-4-K Mic boom; Kenwood (HC-4)	Δmwfv 47.90
B-4-T Mic boom; Ten-Tec (HC-4)	Δm 47.90
B-4-Y Microphone boom; Yaesu (HC-4)	Δmwfv 47.90
B-5-I Microphone boom; Icom (HC-5)	Δmwfv 47.90
B-5-K Mic boom; Kenwood (HC-5)	Δmwfv 47.90
B-5-Y Microphone boom; Yaesu (HC-5)	Δmwfv 47.90
CC-1-I Cable for Icom	21.90
CC-1-K Cable for Kenwood	21.90
CC-1-Y Cable for Yaesu	21.90
FL-1 Flexlite	Dm 22.90
FL-2 Flexlite	Dm 32.50

Ham Radio Handbook	10.00
Ear Pads	pair 5.00
Boom Clip	5.00

RM-80 80m CW 400w PEP resonator	\$ 26.95
RM-75 75m phone 400w PEP resonator	26.95
RM-40 40m 400w PEP resonator	24.95
RM-30 30m 400w PEP resonator	24.95
RM-20 20m 400w PEP resonator	21.95
RM-17 17m 400w PEP resonator	21.95
RM-15 15m 400w PEP resonator	15.95
RM-12 12m 400w PEP resonator	15.95
RM-11 11m 400w PEP resonator	15.95
RM-10 10m 400w PEP resonator	15.95
RMX-B Black 10m resonator w/mast	Δmwfv 34.95
RMX-W White 10m resonator w/mast	Δmwfv 34.95
RM-80S 80m CW 2kw PEP resonator	49.95
RM-75S 75m phone 2kw PEP resonator	49.95
RM-40S 40m 2kw PEP resonator	35.95
RM-20S 20m 2kw PEP resonator	28.95
RM-15S 15m 2kw PEP resonator	24.95
RM-11S 11m 2kw PEP resonator	23.95
RM-10S 10m 2kw PEP resonator	23.95
MO-1 54" mast for fender or deck mount	31.95
MO-2 54" mast for bumper mount	31.95

HUSTLER - continued **Reg Sale**

MO-3 54" no break-over mast	23.95	
MO-4 22" mast for special applications	19.95	
VP-1 Tri-band adapter	5.95	
RSS-2 Resonator spring	9.95	
QD-2 Stainless quick disconnect	19.95	
L-14-144 12' RG-58, PL-259 to lugs	9.95	
L-14-240 20' RG-58, PL-259 to lugs	12.95	
LU-216 18' RG-58, PL-259s both ends ..Dmfv	13.95	9 ⁹⁵

STAINLESS 2" MOBILE BALL MOUNTS

SSM-1 Ball & spring, cadmium hardware	\$ 46.95	
SSM-2 Ball, cadmium hardware	26.95	
SSM-3 Stainless steel spring	24.95	

1-1/2" MOBILE BALL MOUNTS

C-32 Chrome plated ball	\$ 11.95	
C-30 Chrome plated spring	11.95	
C-29 Stainless steel spring	17.95	
BM-1 Single strap bumper mt w/C-32	21.95	

3/8-24 THREAD MOBILE MOUNTS

GCM-1 Rain gutter mount	\$ 12.95	9 ⁹⁵
HLM Trunk lip mount w/swivel	22.95	
HOT Hustloff trunk lip mt w/swivel	23.95	
MM-3 Universal mount with 17' coax	21.95	
RVM Recreational vehicle mount	20.95	
TGM-1 Trunk groove mount	12.95	
TLM Trunk lip mount	21.95	

HF ANTENNAS

4-BTV 40/20/15/10m 21' trap vertical	\$166.95	109 ⁹⁵
5-BTV 80/40/20/15/10m 25' trap vertical	211.95	139 ⁹⁵
30-MTK 30m trap kit for 4-BTV/5-BTV	41.95	39 ⁹⁵
6-BTV 80/40/30/20/15/10m 24' trap vert	246.95	159 ⁹⁵
G-2537 10m 4.2db vertical antenna	134.00	99 ⁹⁵
VRK-1 Radial kit for HF verticals	Dmfv	37.95

VHF BASE STATION ANTENNAS

G-3754 6m 4.2db vertical antenna	\$134.00	99 ⁹⁵
G6-144B 2m 6 db 10' vertical antenna	149.95	114 ⁹⁵
G6-270R 2m/440 6db 7.6' base station ant ..	208.95	159 ⁹⁵
G7-144 2m 7 db 15' vertical antenna	208.95	159 ⁹⁵
G7-220 220 MHz 7 db 10' vertical antenna ...	199.95	149 ⁹⁵
G6-440 440 MHz 6 db 7' vertical antenna	186.95	139 ⁹⁵

SPIRIT VHF/UHF BASE ANTENNAS (Special Order)

HSU-14448 2m unity gain base antenna ...*T	\$400.00	219 ⁹⁵
HS3-14448 2m 3db base antenna	*T+m	495.00
HD6-14448 2m 6db base antenna	*T	833.00
HS6-43050 430-450MHz 6 db base ant	*T	697.00
HS9-43050 430-450MHz 9 db base ant	*T	766.00
HS6-12430 1.2GHz 6 db base antenna	*T	485.00
HS9-12430 1.2GHz 9 db base antenna	*T	766.00
HS10-12430 1.2GHz 10 db base antenna	*T	766.00
HS12-12430 1.2GHz 12 db base antenna	*T	965.00

*Specify exact frequency and height above ground that the Spirit antenna will be mounted above surrounding terrain. These antennas are drop-shipped (shipped direct to you from the Hustler factory). On these factory drop-shippments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Mineral Wells, Texas via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order antennas.

VHF MOBILE ANTENNAS

BBL-144A 2m FM ¾" hole mt antenna, 3.4db	\$ 39.95	
BBLT-144A 2m FM trunk lip mt ant, 3.4 db	47.95	42 ⁹⁵
CG-144 2m FM ¾-24 ant, 7' high, 5.2 db	31.95	
CGT-144 2m FM trunk mt ant, 7' high, 5.2db	51.95	49 ⁹⁵
CG-220 220 FM ¾-24 antenna, 5.2 db	31.95	
CGT-220 220 MHz 5.2 db trunk mt antenna ..	51.95	44 ⁹⁵
FX-2 2m FM 3.4 db magnetic mt antenna	33.95	
FX-2B 2m FM 3.4 db black mag mt antenna ..	38.95	
FX-220 220 FM 3.4 db magnetic mt ant	33.95	
FX-220B 220 FM 3.4 db black mag mt ant	38.95	
FXM FX-style magnet mount w/coax	Dmwf	19.95
MKR-2 Radial kit for SF-2/CG-144	20.95	
RX-2 2m FM 3.4db magnetic mount ant	24.95	
RX-220 220 FM 3.4db magnetic mt antenna ..	24.95	
RX-440 440 FM 5 db magnetic mt antenna ...	24.95	
SF-2 2m FM ¾-24 ant, 4' high, 3.4 db	14.95	
SF-220 220 MHz ¾-24 antenna, 3 db	14.95	

HUSTLER - continued **Reg Sale**

THF 140-500 MHz ¼ wave trunk mount ant ...	23.95	
UGM 140-500 MHz ¼ wave BNC mag mt ant ..	21.95	
UHT-1 140-500 MHz ¼ wave roof mt ant	14.95	

HY-GAIN (HYG)

TRI-BAND BEAMS (20-15-10m)

398S TH1DXS 11el 20/17/15/12/10m, 24' bm ..	1026.95	859 ⁹⁵
391S TH7DXS 7 el, 24' boom w/balun	755.95	639 ⁹⁵
393S TH5Mk2S 5 el, 19' boom w/balun	648.95	549 ⁹⁵
395S Explorer 14 4 el, 14' boom w/balun	499.95	429 ⁹⁵
396S QK-710 10MHz or 40m EX add-on ...	158.95	149 ⁹⁵
388S TH3Mk4 3 el, 14' boom	380.95	329 ⁹⁵
221S-1 TH3JRS 3 el, 12' boom, 750w PEP	316.95	269 ⁹⁵
390S TH2Mk3S 2 el, 6' boom	320.95	269 ⁹⁵

MONOBAND BEAMS

371S Discoverer 7-1 30m or 40m rotatable dipole	\$256.95	229 ⁹⁵
372S Discoverer 7-2 40m 2 el 23' boom	560.95	474 ⁹⁵
373S Discoverer 7-3 3rd el; 372S; 35' boom	353.95	299 ⁹⁵
377S-1 205CA 20m 5 el, 34' boom	628.95	529 ⁹⁵
394S 204BAS 20m 4 el, 26' boom	457.95	389 ⁹⁵
226S 203BAS 20m 3 el, 16' boom	274.95	239 ⁹⁵
376S 155B/CAS 15m 5 el, 26' boom	354.95	299 ⁹⁵
236S 153BAS 15m 3 el, 12' boom	169.95	149 ⁹⁵
375S 105B/CAS 10m 5 el, 24' boom	233.95	209 ⁹⁵
239S-1 103BAS 10m 3 el, 8' boom	122.95	109 ⁹⁵
1009AA LP-1009AA 13-30 MHz 12 el LP ...m	1231.95	1029
1010AA LP-1010AA 10-30 MHz 14 el LP ...m	1778.95	1489

MULTI-BAND VERTICALS

188S DX-88 8-band vertical antenna	\$322.95	279 ⁹⁵
189S GRK-88 Ground radial kit	64.95	59 ⁹⁵
190S RRK-88 Roof radial kit	82.95	74 ⁹⁵
191S 160MK-88 160m kit for 188S	169.95	149 ⁹⁵
182S 18HTS Hy-Tower 5-band, 50' high ....T	699.95	599 ⁹⁵
LC-160Q 160m loading coil for Hy-Tower ...	53.05	49 ⁹⁵
385S 14AVQ/WBS 40/20/15/10m, 18'	152.95	139 ⁹⁵
384S 12AVQS 20/15/10m, 13.5' high	104.95	94 ⁹⁵
184 18RMQ Roof kit-12/14AVQ/S, 18AVT/S ...	63.95	59 ⁹⁵
193S 18VS 80-10m trapless vert, 18' high ...	52.95	49 ⁹⁵

MULTI-BAND DOUBLET

380S 2BDQS 80/40m 101' trap doublet	\$111.95	99 ⁹⁵
383S 5BDQS 80/40/20/15/10m 94' trapt	224.95	189 ⁹⁵
381S 19PD 80-10m 233' 1-band port dipole	225.95	199 ⁹⁵

VHF/UHF BASE STATION ANTENNAS

343S 66DX 6m 6 el beam, 24' boom	\$215.95	189 ⁹⁵
230S-1 64DX 6m 4 el beam, 12' boom	114.95	104 ⁹⁵
232S 215DX 2m 15 el beam, 28' boom	195.95	174 ⁹⁵
214S-1 214FM 2m 14 el beam, 15' boom	68.95	
208S-1 28FM 2m 8 el beam, 12' boom	59.95	
205S-1 25FM 2m 5 el beam, 6' boom	44.95	
203S-1 23FM 2m 3 el beam, 3.5' boom	34.95	
231S 70-31DX 430 31 el beam, 24' boom	189.95	169 ⁹⁵
338 GPG2B 2m ground plane ant	39.95	
331S V-42R 2m/440 type N base ant	147.95	134 ⁹⁵
335S-1 V-2R 2m ground plane ant	96.95	89 ⁹⁵
337S-1 V-4R 440 ground plane ant	92.95	84 ⁹⁵

OSCAR LINK ANTENNAS

216S 216SAT 2m 16el 145.9MHz boom	\$192.95	179 ⁹⁵
215S 7030SAT 435 MHz 30 el beam	185.95	169 ⁹⁵
217 60" x 1½" fiberglass crossboom	67.95	
218S OSCAR Link Complete Oscar ant sys ...	431.95	369 ⁹⁵

ACCESSORIES

155 CI Center insulator for doublets	\$ 12.95	
156 EI 7" doublet end insulators	pair	6.95
157S CIC Dipole center insulator w/SO-239 ..	21.95	
242S BN-86 80-10m balun	34.95	
243S BN-4000B 4kw PEP 160-10m beam balun ..	87.95	82 ⁹⁵
244S BN-4000D 4kw PEP 160-10m dipole balun ..	87.95	82 ⁹⁵
245S BN-4000N 4kw PEP 80-10m N beam balun	98.95	89 ⁹⁵
2400-155 62400155 Contester bm mic/headset	83.95	79 ⁹⁵
610-1 (Telex) 600 ohm headphones	Dmwf	9 ⁹⁵

HY-GAIN CRANK-UP TOWERS

129 HG-37SS 37' self-supporting tower	T	1450.95
125-1 HG-52SS 52' self-supporting tower ..T		2439.95
130-1 HG-54HD 54' hvy duty self-support ..T		2955.95
131-1 HG-70HD 70' hvy duty self-support ..T		4261.95
116 HG-5 5' 2" OD .120 wall steel mast		75.95

HY-GAIN - continued **Reg Sale**

117 HG-10 10' 2" OD .120 wall steel mast Tw	97.95	79 ⁹⁵
118 HG-15 15' 2" OD .120 wall steel mast .T	156.95	149 ⁹⁵
121B HG-TBT Truss bearing w/sleeve	82.95	74 ⁹⁵
122 HG-COA Coax arm*, tower legs 1"-1½" ..	21.95	

*One required per section

140 HG-TOA Tilt-over 'gin-pole'	T	691.95
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Hy-Gain Towers are shipped PREPAID (Hy-Gain's expense) via truck direct from the factory (48 states). Any other Hy-Gain antennas, rotors, or accessories on the same order as a Hy-Gain tower will also be shipped PREPAID from the factory. On these drop-shippments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise. This means at you may be billed before you receive your order. Please allow sufficient delivery time. Most truck lines will not unload the tower, so please be sure to have enough manpower and/or equipment on hand.

HY-GAIN ANTENNA ROTORS

305 AR-40 Solid state light duty rotor	\$219.95	199 ⁹⁵
302 CD-45-II Medium duty rotor	307.95	279 ⁹⁵
304 HAM IV Heavy duty rotor	435.95	379 ⁹⁵
304D Pathfinder HAM IV digital HD rotor	749.99	639 ⁹⁵
303 TX Tailtwister extra heavy duty rotor	519.95	449 ⁹⁵
303D Pathfinder Tailtwister dig extra HD rotor	799.99	689 ⁹⁵
300 HDR-300 Deluxe digital hvy duty rotor ...	1138.95	949 ⁹⁵
306 Digital rotor control for HAM IV/TX	519.60	439 ⁹⁵

OPTIONAL ACCESSORIES FOR ROTORS

51467-10 MSHD Lwr mast support; HAM IV/TX	\$ 75.95	
51472-10 MSLD Lwr mast support; CD45II/AR40	23.95	
50559-10 TSP-1 Tower spacing kit	21.95	

See BELDEN for rotor cable

ICOM (ICO)

IC-781 Xcv/Rcv/ps/auto tuner/spec scope Δv	8835.00	CALL
FL-103 2.8 KHz SSB filter	Δmwf	89.00
UT-36 Voice synthesizer		54.00
IC-765 Xcvt/ps/keyer/auto tuner	Dmwf	4125.00
CR-282 High stability crystal unit		122.00
FL-53A 250 Hz CW filter (2nd IF)		178.00
FL-101 250 Hz CW filter (1st IF)		96.00
FL-102 6 KHz AM filter	Δmf	68.00
HM-36 Scanning hand mic		54.00
MB-19 Rack mounting handles		54.00
SM-6 Desk microphone		93.00
SP-20 Speaker w/audio filter		225.00
UT-30 Tone encoder		40.00
UT-36 Voice synthesizer		54.00
EX-202 LDA-2 auto bandswitch unit; 730 Dm		26.00
EX-205 TRV unit for Xvtr switching; 730 Dm		26.00
FL-53 250 Hz CW filter for IC-740	Dm	96.00
FL-54 270 Hz CW filter for IC-730/740/745 Dm		92.00
FL-70 2.8 KHz wide SSB filter; 751A	Δm	88.00
MB-18 Mobile mount for IC-751A	Dm	43.00

IC-737A Xcvt/Rcvt/tune/kyr/mic/VOX Dmwf	1865.00	1299
IC-738 Xcvt/SW Rcvt/tuner/keyer/mic/VOX ...	1935.00	CALL
IC-736 Xcvt w/6m/tuner/power supply	2485.00	CALL
PS-55 Power supply	345.00	289 ⁹⁵
PS-15 20A power supply	330.00	279 ⁹⁵
AH-3 Automatic antenna tuner	594.00	499 ⁹⁵
AH-2B Bumper mt & whip	275.00	234 ⁹⁵
AT-150 100w 9-band automatic ant tuner †	580.00	299 ⁹⁵
CR-282 High stability crystal unit	122.00	112 ⁹⁵
CR-338 High stability xtal unit; 737A/736 ..	59.00	
FL-52A 500 Hz CW filter (2nd IF)	178.00	159 ⁹⁵
FL-53A 250 Hz CW filter (2nd IF)	178.00	159 ⁹⁵
FL-100 500 Hz CW filter (1st IF)	96.00	
FL-101 250 Hz CW filter (1st IF)	96.00	
HM-36 Extra scanning hand mic	54.00	
MB-49 Mobile mounting bracket	43.00	
SM-6 Desk microphone	93.00	
SP-3 External speaker	102.00	96 ⁹⁵
SP-7 Small external speaker	68.00	



Apply for your AES® CREDIT CARD
Application on p. 156



ICOM - continued

	Reg	Sale
SP-20 Speaker w/audio filter	225.00	199 ⁹⁵
SP-21 External speaker	100.00	94 ⁹⁵
UT-30 Tone encoder	40.00	
EX-241 Marker unit for IC-745 .....Dm	37.00	29 ⁹⁵
EX-242 FM unit for IC-745 .....Dm	75.00	49 ⁹⁵
IC-735 Xcvr/SW Rcvr w/mic .....Dmwv	1485.00	1199
PS-55 Power supply	345.00	289 ⁹⁵
PS-15 20A power supply	330.00	279 ⁹⁵
AH-2A Antenna tuning system only	691.00	579 ⁹⁵
AH-2B Bumper mt & whip	275.00	234 ⁹⁵
AT-150 100w 9-band automatic ant tuner †	580.00	299 ⁹⁵
EX-243 Electronic keyer unit	100.00	94 ⁹⁵
FL-32A 500 Hz CW filter	92.00	
FL-63A 250 Hz CW filter	88.00	
MB-5 Mobile mount	43.00	
SM-6 Desk microphone	93.00	
SP-3 External speaker	102.00	96 ⁹⁵
SP-7 Small external speaker	68.00	
SP-20 Speaker w/audio filter	225.00	199 ⁹⁵
UT-30 Tone encoder	40.00	
IC-728 Xcvr/SW Rcvr w/mic	1325.00	CALL
PS-55 Power supply	345.00	289 ⁹⁵
PS-15 20A power supply	330.00	279 ⁹⁵
AH-3 Automatic antenna tuner	594.00	499 ⁹⁵
AH-2B Bumper mt & whip	275.00	234 ⁹⁵
AT-160 Attached automatic ant tuner†	442.00	299 ⁹⁵
CR-64 High stability oscillator crystal	114.00	104 ⁹⁵
FL-100 500 Hz CW filter	96.00	
FL-101 250 Hz CW filter	96.00	
MB-5 Mobile mount	43.00	
SM-6 Desk microphone	93.00	
SP-3 External speaker	102.00	96 ⁹⁵
SP-7 Small external speaker	68.00	
SP-20 Speaker w/audio filter	225.00	199 ⁹⁵
UI-7 AM/FM module for IC-728	86.00	
UT-30 Tone encoder	40.00	
IC-707 Xcvr/SW Rcvr w/mic	1032.00	CALL
PS-55 Power supply	345.00	289 ⁹⁵
PS-15 20A power supply	330.00	279 ⁹⁵
AH-3 Automatic antenna tuner	594.00	499 ⁹⁵
AH-2B Bumper mt & whip	275.00	234 ⁹⁵
AT-160 Attached automatic ant tuner†	442.00	299 ⁹⁵
CR-338 High stability crystal unit	59.00	
FL-52A 500 Hz CW filter (2nd IF)	178.00	159 ⁹⁵
FL-53A 250 Hz CW filter (2nd IF)	178.00	159 ⁹⁵
MB-5 Mobile mount	43.00	
SM-6 Desk microphone	93.00	
SP-3 External speaker	102.00	96 ⁹⁵
SP-7 Small external speaker	68.00	
SP-20 Speaker w/audio filter	225.00	199 ⁹⁵
SP-21 External speaker	100.00	94 ⁹⁵
UI-9 FM module	82.00	
UT-30 Tone encoder	40.00	
IC-2KL 160-15m/WARC solid state linear	2710.00	CALL
IC-4KL 1kw output solid state linear	9000.00	CALL
OPC-118 Adapter; 2KL/4KL; 725/735/765 ..	18.00	
AH-2A Antenna tuning system only	691.00	579 ⁹⁵
AH-2B Bumper mt & whip	275.00	234 ⁹⁵
OPC-137 Adapt; AH-2/A - IC-751A/745 Dmwfv	18.00	
AT-150 100w 9-band automatic ant tuner ...†	580.00	299 ⁹⁵
OPC-137 Adapt; AT-150 - IC-751A/745 Dmwfv	18.00	
AT-500 500w 9-band automatic ant tuner ...†	995.00	799 ⁹⁵
OPC-118 Adapter; AT-500; 725/735/765/781 ..	18.00	

SHORTWAVE RECEIVERS

R-1* .1MHz-1.3GHz AM/FM handheld Rcvr	\$577.00	CALL
R-1-15 .1MHz-1.3GHz AM/FM hand Rcvr/cell blkd	577.00	CALL
BP-82 battery FREE with R-1/R-1-15! Limited Time!		
HP-4 Lightweight headphones	21.00	
Note: R-1/R-1-15 use 'W'-series HT accessories		
R-71A 100 KHz - 30 MHz dig keyboard Rcvr	1440.00	CALL

Hi! I'm John, AB9G...

Trades? You Bet!

We need your Clean, Late Model Gear.

Call me for a Top Trade-in Quote!

1-800-558-0411



ICOM - continued

	Reg	Sale
CK-70 (EX-299) 12v DC option	30.00	
CR-64 High stability oscillator crystal	114.00	104 ⁹⁵
EX-257 FM unit	79.00	
EX-310 Voice synthesizer	77.00	
FL-32A 500 Hz CW filter	92.00	
FL-44A SSB filter	206.00	179 ⁹⁵
FL-63A 250 Hz CW filter	88.00	
MB-12 Mobile mount	43.00	
RC-11 Infrared wireless remote control	105.00	99 ⁹⁵
SP-3 External speaker	102.00	96 ⁹⁵
R-100* .1MHz-1.856GHz AM/FM 12v Rcvr	850.00	CALL
R-100-11 .1MHz-1.856GHz am/fm 12v Rcvr/cell blkd	850.00	CALL
AD-15A Power supply	63.00	39 ⁹⁵
AH-7000 25-1000 MHz discone antenna ...	150.00	134 ⁹⁵
CP-11 Cig cord w/noise filter	29.00	
HP-4 Lightweight headphones	21.00	
R-7000* 25 MHz - 2 GHz scanning receiver ..	2000.00	CALL
AH-7000 25-1000 MHz discone antenna ...	150.00	134 ⁹⁵
CK-70 (EX-299) 12v DC option	30.00	
EX-310 Voice synthesizer	77.00	
MB-12 Mobile mount	43.00	
RC-12 Infrared wireless remote control	100.00	94 ⁹⁵
SP-3 External speaker	102.00	96 ⁹⁵
TV-R7000 ATV unit for R-7000	270.00	229 ⁹⁵
R-7100* 25 MHz - 2 GHz scanning Rcvr	1850.00	CALL
R-7100-12 25 MHz-2 GHz scan Rcvr/cell blkd	1850.00	CALL
AH-7000 25-1000 MHz discone antenna ...	150.00	134 ⁹⁵
MB-5 Mobile mount	43.00	
MB-23 Carrying handle	11.00	
SP-3 External speaker	102.00	96 ⁹⁵
SP-7 Small external speaker	68.00	
SP-20 Speaker w/audio filter	225.00	199 ⁹⁵
TV-R7100 TV/FM adapter	310.00	259 ⁹⁵
UT-36 Voice synthesizer	54.00	
R-9000* .1-1999.8MHz Rcvr/spectrum scope ..	6825.00	CALL
*United States & state government agencies or a political subdivision thereof and communications utility companies and their legal agents ONLY may purchase unblocked models of R-1, R-100, R-7000, R-7100 and/or R-9000 for official government or communications utility company use only. Mail or FAX purchase order to AES.		
SP-20 Speaker w/audio filter	225.00	199 ⁹⁵
UT-36 Voice synthesizer	54.00	

6m TRANSCEIVERS

IC-575H 100w 6/10m FM/SSB/CW Xcvr Dmwfv	2460.00	1649
PS-55 Power supply	345.00	289 ⁹⁵
AH-610 Dual band 6/10m base antenna	137.00	129 ⁹⁵
EX-20 6/10m automatic ant selector	97.00	
CR-64 High stability oscillator crystal	114.00	104 ⁹⁵
FL-100 500 Hz CW filter	96.00	
FL-101 250 Hz CW filter	96.00	
FL-102 6 KHz AM filter	68.00	
UT-36 Voice synthesizer	54.00	

2m TRANSCEIVERS

IC-2000H 50w 2m FM Xcvr w/TTP mic	\$430.00	CALL
\$20 coupon - IC-2000H thru 6/30/95		
OPC-347 23' DC power cable	34.00	
UT-55 DTMF tone encoder/decoder unit	50.00	
UT-85 Tone squelch unit	55.00	
UT-101 DTMF unit	20.00	
IC-281H 50w 2m FM Xcvr/TTP/9600 baud	488.00	CALL
\$25 coupon - IC-281H thru 6/30/95		
OPC-347 23' DC power cable	34.00	
OPC-440 Mic extension cable	62.00	
UT-66 Voice synthesizer	60.00	
UT-85 Tone squelch unit	55.00	
IC-275H 100w 2m FM/SSB/CW Xcvr	1915.00	CALL
PS-55 Power supply	345.00	289 ⁹⁵
AG-25 Mast mounted GaSFET preamp	160.00	149 ⁹⁵
CR-64 High stability oscillator crystal	114.00	104 ⁹⁵
FL-83 CW filter	109.00	99 ⁹⁵
UT-34 Tone squelch unit	68.00	
UT-36 Voice synthesizer	54.00	
IC-2330A 45w 2m/25w 220 FM Xcvr/TTP	1020.00	CALL
HM-56A Extra autodial TTP mic	125.00	109 ⁹⁵
UT-55 DTMF tone encoder/decoder unit	50.00	
UT-66 Voice synthesizer; 2330A/3230A/H ...	60.00	
UT-67 Tone squelch unit	90.00	

ICOM - continued













	Reg	Sale
IC-2340 45w 2m/35w 440 FM Xcvr/TTP mic ..	744.00	CALL
\$50 coupon - IC-2340 thru 6/30/95		
OPC-347 23' DC power cable	34.00	
OPC-440 Mic extension cable	62.00	
UT-55 DTMF tone encoder/decoder unit	50.00	
UT-66 Voice synthesizer	60.00	
UT-89 Tone squelch unit	80.00	
IC-2700H LTD 50w 2m/35w 440FM/HM90A mic †	959.00	CALL
HM-90A wireless mic FREE w/IC-2700H LTD! Limited Time!		
BC-96 Microphone holder	31.00	
EX-1513 Infrared sub receiver	20.00	
HM-90A Wireless microphone	152.00	139 ⁹⁵
MB-58 Remote controller bracket	28.00	
OPC-347 23' DC power cable	34.00	
OPC-438 11.5' separation kit	30.00	
OPC-439 23' separation kit	44.00	
OPC-440 Mic extension cable	62.00	
OPC-441 Speaker extension cable	24.00	
UT-66 Voice synthesizer	60.00	
UT-84 Tone squelch unit	80.00	
IC-820H 2m/430 SSB/FM sat Xcvr/9600/no mic	1999.00	CALL
PS-55 Power supply	345.00	289 ⁹⁵
PS-15 20A power supply	330.00	279 ⁹⁵
AG-25 2m mast mounted GaSFET preamp ..	160.00	149 ⁹⁵
AG-35 430 MHz mast mounted preamp	165.00	154 ⁹⁵
CR-293 High stability xtal unit	276.00	249 ⁹⁵
FL-132 CW filter	96.00	
HM-12 Scan hand microphone	54.00	
MB-5 Mobile mount	43.00	
SM-6 Desk microphone	93.00	
SP-3 External speaker	102.00	96 ⁹⁵
SP-7 Small external speaker	68.00	
SP-20 Speaker w/audio filter	225.00	199 ⁹⁵
SP-21 External speaker	100.00	94 ⁹⁵
UT-36 Voice synthesizer	54.00	
UT-50 Tone decoder	54.00	
IC-Delta-100H 2m/440/1.2 GHz FM Xcvr/TTP	1570.00	CALL
MB-50 Remote controller bracket	21.00	
OPC-332 11.5' separation kit	22.00	
OPC-333 23' separation kit	27.00	
OPC-335 16.4' speaker cable	29.00	
OPC-347 23' DC power cable	34.00	
UT-66 Voice synthesizer	60.00	
UT-75 DTMF decoder unit	50.00	
UT-76 Tone squelch unit	120.00	109 ⁹⁵
AH-32 2m/440 dual band mobile antenna	60.00	
Larsen PO-K Roof mt, coax for AH-32	24.00	
Larsen PO-MM Magnet mt, coax; AH-32	31.70	
Larsen PO-TLM Trunk lip mt, coax; AH-32 ...	27.30	
Icom AHB-32 Tnk lip mt, coax; AH-32 Δmwfv	55.00	29 ⁹⁵

Accessory for IC-u2AT

BC-50 Desk quick cgr; not for BP-20 .....Dm	\$120.00	59 ⁹⁵
BP-21 7.2V 120ma battery	46.00	29 ⁹⁵

Accessories for IC-2AT

AD-12 External pwr adapter; 2/4GAT/32AT	31.00	
BA-10 Bottom slide cap	10.00	
BC-16U Wall charger; BP-5A/7/8 only	29.00	
BC-25U Extra wall charger; BP-3 only	25.00	
BC-35 Drop-in rapid charger; all batteries	120.00	99 ⁹⁵
BP-2* 425ma 7.2v long life batt; all HTs	62.00	
BP-3 250ma 8.4v battery; all HTs	47.00	
BP-4 Alkaline battery case; all HTs	25.00	
BP-5* 425ma 10.8v high power batt; all HTs	79.00	
*BC-35 required to charge BP-2/5		
BP-5A 425 ma 10.8v direct charge batt; all ...	79.00	
BP-7 425ma 13.5v 5w batt; deluxe HTs only ..	88.00	
BP-8 800ma 8.4v long life batt; all HTs	87.00	
BP-70* Extra 270ma 13.2v batt; 2GAT/32AT ...	82.00	
*BP-70 9-hours max charge time in BC-35		
CM-12 Alk batt case (10 AAs); dlx HTs ...Δmw	45.00	
CP-1 Cig cgr; BP-3/7/8/DC cord; dlx HTs	21.00	
CP-10 Battery separation cable w/clip	37.00	
CP-11 Cig cord w/noise filter; dlx HTs	29.00	
DC-1 DC operation module; std HTs	29.00	
FA-2 Extra 2m flexible antenna	21.00	
FA-140B Extra 2m flex ant for IC-2GAT	21.00	
FA-1443B Extra 2m/440 dual band flex ant ...	21.00	
HH-SS Handheld shoulder strap	21.00	

ICOM - continued		Reg Sale	ICOM - continued		Reg Sale	ICOM - continued		Reg Sale			
HM-9	Speaker/mic; all HTs	53.00	BP-132	600ma 12v battery/mic	109.00	104 ⁹⁵	LC-117	Carrying case for BP-132A	27.00		
HM-46	Slim-line speaker/mic	50.00	BP-157	900ma 7.2v battery	62.00		MB-30	Mobile/wall bracket	29.00		
HS-10	Boom mic/headset	40.00	CP-13	Cig cable w/filter	29.00		OPC-288L	DC power cable	14.00		
HS-10SA	VOX unit (deluxe HTs only)	50.00	HM-9	Speaker/microphone	53.00		SP-13	Earphone	3.00		
HS-10SB	PTT switchbox	50.00	HM-46	Slim-line speaker/mic	50.00		UT-49	DTMF decoder unit	54.00		
HS-51	Headset w/VOX	70.00	HM-54	Hvy duty spkr/mic	60.00		IC-Delta-1A	2m/440/1.2 FM HT/batt/cgr/TTP	987.00	CALL	
LC-2AT	Leather case; IC-2AT w/BP-3	28.00	14 ⁹⁵	HM-55A	Speaker/mic w/TTP	115.00	89 ⁹⁵	AD-22	External battery charge adapter	45.00	
LC-2GAT	Leather case for IC-2GAT	28.00	19 ⁹⁵	HM-75	Speaker/mic w/remote control	70.00		AD-27	Charge adapt; BP-101 - 103/BC-79	13.00	
LC-11	Vinyl case; deluxe HTs w/BP-3	17.00	14 ⁹⁵	HS-51	Headset w/VOX	70.00		BP-100	Battery holder	25.00	
LC-12	Vinyl case; dlx HTs w/BP-5	12.00		LC-103	Vinyl case; IC-W21A w/BP-130/131	27.00		BP-101	700ma 7.2v battery	68.00	
LC-14	Vinyl case; dlx HTs w/BP-7/8	24.00	19 ⁹⁵	LC-104	Vinyl case; IC-W21A w/BP-132	27.00		BP-102	1200ma 7.2v battery	94.00	
LC-38	Vinyl case; 2GAT w/BP-2/3/4	17.00	9 ⁹⁵	LC-105	Vinyl case; IC-W21AT w/BP-130/131	27.00		BP-103	600ma 12v battery	110.00	99 ⁹⁵
LC-39	Vinyl case; 2GAT w/BP-5/7/0	22.00	9 ⁹⁵	LC-106	Vinyl case; IC-W21AT w/BP-132	27.00		LC-81	Vinyl case for BP-100/101/102	25.00	
LC-40	Vinyl case; 2GAT w/BP-5A/7/8	21.00	9 ⁹⁵	MB-30	Mobile/wall bracket	29.00		LC-82	Vinyl case for BP-103	25.00	
LC-41	Vinyl case; 32AT w/BP-2/3/4	17.00	6 ⁹⁵	OPC-288	Mini DC pwr cord	14.00		UT-70	Tone encoder/decoder	145.00	129 ⁹⁵
LC-42	Vinyl case; 32AT w/BP-5/7/0	17.00	4 ⁹⁵	IC-W2A	2/5w 2m/440 HT/batt/cgr/TTP Dmwfv	579.00	439 ⁹⁵	IC-T21A	2m FM HT/batt/cgr/TTP	455.00	CALL
LC-43	Vinyl case; 32AT w/BP-5A/7/8	22.00	9 ⁹⁵	AD-14	BC-74 charge adapter	31.00		\$30 coupon - IC-T21A thru 6/30/95			
MB-16	Window/car door mount	29.00		AD-20	BC-77 charge adapter	45.00		AD-44	Desk charger adapter	13.00	
MB-16D	Mobile mtg bkt for all HTs	29.00		AH-20	Replacement rcv ant for IC-2SRA	20.00		BC-74/BC-110A	Extra wall charger	29.00	
MB-24	Window/car door mt; 2GAT	29.00	19 ⁹⁵	BA-11	Bottom cap	8.00		BC-79A	Desk charger (adapter required)	150.00	139 ⁹⁵
RB-1	Vinyl waterproof radio bag	39.00	29 ⁹⁵	BA-12	Drop-in charger adapter	21.00		BP-151	800ma 6v battery	42.00	
UT-40	Tone squelch decoder; 2GAT/32AT	60.00		BC-72	Rapid desk charger	135.00	124 ⁹⁵	BP-152	1100ma 6v battery	48.00	
Accessories for P-series hand-helds				BC-74/BC-110A	Extra wall cgr; 24AT/S-series	29.00		BP-153	600ma 12v battery	109.00	104 ⁹⁵
BC-80	Desk cgr; BP-112-114, BP-81-85	\$150.00	139 ⁹⁵	BC-77/BC-105A	Extra wall cgr; W2A/2SRA	29.00		BP-159	Battery case	25.00	
BC-74/BC-110A	Extra wall cgr; BP-111-114	29.00		BP-81	7.2v 110ma battery	55.00		CP-12	Cig lighter cable w/filter	29.00	
BP-110	Alkaline battery case	25.00		BP-82	7.2v 300ma battery	60.00	49 ⁹⁵	HM-46	Slim-line speaker/mic	50.00	
BP-111	Extra 7.2v 400ma 1.5w battery	62.00		BP-83	7.2v 600ma battery	65.00		HM-54	Heavy duty spkr/mic	60.00	
BP-112	7.2v 700ma 1.5w battery	68.00		BP-84	7.2v 1000ma battery	87.00		HM-55A	Speaker/mic w/TTP	115.00	89 ⁹⁵
BP-113	7.2v 1200ma 1.5w battery	92.00		BP-85	12v 340ma 5w battery	113.00	109 ⁹⁵	HM-75	Speaker/mic w/remote control	70.00	
BP-114	12v 400ma 5w battery	112.00	99 ⁹⁵	BP-90	AA battery case	25.00		HS-51	Headset w/VOX	70.00	
CP-12	Cig lighter cable w/filter	29.00		CP-12	Cig lighter cable w/filter	29.00		LC-109	Vinyl case for BP-151/159	27.00	
HM-9	Speaker/microphone	53.00		CP-13	Cig cable w/filter; W2A/2SRA	29.00		LC-110	Vinyl case for BP-153	27.00	
HM-46	Slim-line microphone	50.00		HM-9	Speaker/microphone	53.00		LC-111	Vinyl case for BP-152	27.00	
HM-54	Heavy duty speaker/mic	60.00		HM-46	Slim-line speaker/mic	50.00		MB-30	Mobile/wall bracket	29.00	
HS-51	Headset w/VOX	70.00		HM-54	Hvy duty spkr/mic; not for 2G/W2A	60.00		OPC-254	Mini DC power cable	10.00	
LC-91	Vinyl case; BP-111	25.00	22 ⁹⁵	HM-65	Slim-line spkr/mic; W2A/2SRA	55.00		SP-13	Earphone	3.00	
LC-92	Vinyl case; BP-110/112	17.00	12 ⁹⁵	HM-70	Speaker/mic; W2A/2SRA	60.00		RP-1520	25w 2m FM repeater	2900.00	CALL
LC-93	Vinyl case; BP-113/114	17.00	14 ⁹⁵	HS-51	Headset w/VOX	70.00		220 MHz TRANSCEIVERS			
MB-30	Mobile/wall bracket	29.00		HS-60	VOX headset; W2A/2SRA	88.00	49 ⁹⁵	IC-03AT	2.5w 220 HT/batt/cgr/TTP	\$450.00	CALL
OPC-254	Mini DC power cable	10.00		LC-24(L)	Leather case; 24AT/BP-85	26.00		IC-3SAT	2/5w 220 HT/batt/cgr/TTP	425.00	CALL
UT-49	DTMF decoder unit	54.00		LC-53	Vinyl case; 2SA w/no battery	21.00	2 ⁹⁵	IC-03AT uses same accessories as IC-02AT/HP			
Accessories for IC-21A				LC-55	Vinyl case; 2SA/BP-82/83/90	21.00	2 ⁹⁵	IC-3SAT uses same accessories as IC-2SAT			
AD-26	Adapter for BC-79A w/BP-121-124	\$13.00		LC-57	Vinyl case; 2SAT w/no battery	25.00	19 ⁹⁵	IC-38A	25w 220 FM Xcvr w/TTP mic	600.00	CALL
BP-120	AA alkaline battery case	25.00		LC-59	Vinyl case; 2SAT w/BP-82/83/90 Dmf	25.00	19 ⁹⁵	RP-2210	25w 220 MHz FM repeater	2695.00	CALL
BP-121	7.2v 400ma battery	62.00		LC-61	Vinyl case; 2SAT w/BP-84/85	25.00	9 ⁹⁵	430/440 MHz TRANSCEIVERS			
BP-122	7.2v 700ma battery	68.00		LC-63	Vinyl case; 24AT/BP-81/BA-11	17.00		IC-481H	50w 440 FM Xcvr/TTP/9600 baud	\$665.00	CALL
BP-123	7.2v 1200ma battery	92.00		LC-65	Vinyl case; 24AT/BP-82/83/90	17.00		IC-4SRA	2/5w 440 HT/25-905MHz Rcvr	631.00	369 ⁹⁵
BP-124	12v 400ma battery	116.00	104 ⁹⁵	LC-66	Vinyl case; 24AT w/BP-84/85	25.00	19 ⁹⁵	IC-4GXAT	440 FM HT/batt/cgr/TTP	389.00	CALL
HM-9L	Speaker/mic	53.00		LC-71	Case; W2A/2SRA w/BP-81/BA-11	25.00		IC-P4AT	Mini 440 FM HT/batt/cgr/TTP	504.00	269 ⁹⁵
LC-83	Vinyl case for BP-121	25.00		LC-72	Case; W2A/2SRA w/BP-82/83/90	25.00		\$50 coupon - IC-P4AT until gone!			
LC-84	Vinyl case for BP-120/122	25.00		LC-73	Case; W2A/2SRA w/BP-84/85	25.00		IC-41A	440 FM HT/batt/cgr	320.00	209 ⁹⁵
LC-85	Vinyl case for BP-123/124	25.00		LC-SAT(L)	Leather case; 2SAT w/BP-85	28.00	19 ⁹⁵	IC-T41A	440 FM HT/batt/cgr/TTP	472.00	CALL
IC-Z1A	2m/440 HT/batt/cgr/TTP/detach mic	600.00	CALL	MB-22	Alligator belt/pocket clip	11.00		IC-X21AT	440/1.2 FM HT/batt/cgr/TTP	960.00	CALL
AD-51	Battery charger adapter	10.00		MB-25	Stainless steel wall storage unit	30.00		IC-4SAT uses same accessories as IC-2SAT			
BC-79A	Desk charger (adapter required)	150.00	139 ⁹⁵	MB-30	Mobile/wall bracket	29.00		IC-4SRA uses same accessories as IC-2SRA			
BP-170	Battery case	25.00		OPC-254	Mini DC power cable	10.00		IC-4GXAT uses same accessories as IC-2GXAT			
BP-171	4.8v 700ma battery	60.00		OPC-288	Mini DC pwr cord; W2A/2SRA	14.00		IC-P4AT uses same accessories as IC-P2AT			
BP-172	4.8v 950ma battery	66.00		UT-49	DTMF decoder unit for S-series	54.00		IC-41A uses same accessories as IC-21A			
BP-173	9.6v 600ma battery	109.00		UT-50	Tone decoder	54.00		IC-T41A uses same accessories as IC-T21A			
CP-12	Cig lighter cable w/filter	29.00		UT-51	Programmable tone encoder unit	60.00		IC-X21AT uses same accessories as IC-W21AT			
HM-46	Slim-line speaker/mic	50.00		IC-26XAT	2m FM HT/batt/cgr/TTP	359.00	CALL	IC-475H	75w 430-450 FM/SSB/CW Xcvr	2325.00	CALL
HM-54	Hvy duty spkr/mic	60.00		\$10 coupon - IC-26XAT thru 6/30/95			CALL	PS-55	Power supply	345.00	289 ⁹⁵
HS-85	Headset	76.00		IC-26XAT/HP	7w 2m FM HT/batt/cgr/TTP	399.00		AG-35	Mast mounted preamp	165.00	154 ⁹⁵
LC-123	Vinyl case; Z1A w/BP-170/171/172	27.00		AD-25	Battery charger adapter	45.00		CR-64	High stability oscillator crystal	114.00	104 ⁹⁵
LC-124	Vinyl case; IC-Z1A w/BP-173	27.00		AD-28	Batt pack adapter for rapid charger	13.00		FL-32A	CW filter	92.00	
MB-30	Mobile/wall bracket	29.00		BC-77/BC-105A	Extra wall charger	29.00		UT-34	Tone squelch unit	68.00	
OPC-254	Mini DC power cable	10.00		BC-79A	Desk charger (adapter required)	150.00	139 ⁹⁵	UT-36	Voice synthesizer	54.00	
SP-13	Earphone	3.00		BP-130A	Battery case	25.00		RP-4020	25w 440 MHz FM repeater	2637.00	1899
UT-93	Tone squelch unit	60.00		BP-132A	600ma 12v battery/mic	109.00	104 ⁹⁵	<div> AES® GIFT CERTIFICATES... Information on p. 23 </div>			
IC-V21AT	2m/220 FM HT/batt/cgr/TTP	716.00	CALL	BP-157A	900ma 7.2v battery	62.00					
IC-W21AT	2m/440 FM HT/batt/cgr/TTP Dmwfv	536.00	418 ⁹⁵	BP-160	700ma 7.2v battery	48.00		<div>     </div>			
HM-46 FREE with IC-W21AT until gone!				BP-174	600ma 12v battery	96.00					
AD-25	Battery charger adapter	45.00		CP-13L	Cigarette lighter cable	29.00		<div> Same Day Shipping ... Call Toll Free & Use your Credit Card! </div>			
AD-28	Batt pack adapter for rapid charger	13.00		HM-46	Slim-line speaker/mic	50.00					
BC-77/BC-105A	Extra wall charger	29.00		HM-54	Heavy duty spkr/mic	60.00		<div>     </div>			
BC-79A	Desk charger (adapter required)	150.00	139 ⁹⁵	HM-55A	Speaker/mic w/TTP	115.00	89 ⁹⁵				
BP-130	Battery case	25.00		HS-51	Headset w/VOX	70.00		<div>     </div>			
BP-131	900ma 7.2v battery/mic	96.00		LC-116	Carrying case; BP-130A/157A/160	27.00					

ICOM - continued

RP-4020/50w 50w 440 MHz FM repeater	3125.00	CALL
1.2 GHz TRANSCEIVERS		
IC-12GAT 1w 1.2GHz HT/batt/cgr/TTP	\$505.00	369⁹⁵
Note: IC-12GAT uses same accessories as IC-2GAT		
CR-263 High stability unit; IC-1275A	123.00	39⁹⁵
RP-1220 10w 1.2 GHz FM repeater	3400.00	CALL

ACCESSORIES FOR IC-901

EX-767 Power cable connector box	Δmf	\$ 65.00
MB-21 Bracket for controller unit	Δmfv	19.00
MB-31 Mounting bkt for band units	Δm	14.00
MB-32 Mobile mount for trunk	Δm	21.00
OPC-189 Fiber optic cbl 65' extension	Δmf	75.00
OPC-243 30' DC cable	Δm	34.00
UT-48 DTMF encoder/decoder unit	Δmwfv	54.00
UX-S92A 2m SSB/CW module	Δmf	679.00
UX-39A 25w 220 unit	Δm	516.00

MULTI-BAND ALL-MODE TRANSCEIVERS

IC-970H 45w 2m/430 Xcwr w/ps	Δmw	\$3964.00
PS-55 Power supply		345.00
PS-15 20A power supply		330.00
AG-25 2m mast mounted GaSfET preamp ..		160.00
AG-35 430 MHz mast mounted preamp		165.00
AG-1200 1.2 GHz mast mounted preamp ..		137.00
EX-243 Electronic keyer unit		100.00
FL-132 Main band CW filter		96.00
FL-133 Sub band CW filter	Δmw	96.00
MB-19 Rack mounting handles		54.00
SP-20 Speaker w/audio filter		225.00
TV-970 1.2 GHz ATV unit for 970A/H	Δmwfv	510.00
UT-34 Tone squelch unit		68.00
UT-36 Voice synthesizer		54.00
UX-R96 Extended receive unit	Δmfv	500.00
UX-98 2.4 GHz module (Special Order)		2110.00

ACCESSORIES

CT-16 Satellite interface unit		\$116.00
CT-17 CI-V level converter		123.00
UX-14 CI-IV/CI-V converter for CT-17		90.00
EX-309 Interface plug; 751/271/R71A	Δm	88.00
EX-310 Voice synthesizer		77.00
EX-627 HF auto ant selector; up to 7 ants		373.00
HM-7 Amplified mobile mic, 8-pin		54.00
HM-8 TTP microphone, 8-pin		95.00
HM-12 Scan hand microphone		54.00
HM-14 Scan/TTP mic; 25A/H/28A/45A		82.00
HS-15 Goose neck mobile microphone	Δmfv	54.00
HS-15SB PTT switchbox	Δmfv	37.00
MB-23 Side mount carrying handle		11.00
OPC-047 24-pin optional acc cord	Δmfv	16.50
OPC-137 24-pin adaptr cable; all base	Δmfv	18.00
PS-30 20A systems ps w/6-pin cord	Δmfv	470.00
OPC-052 2-pin cord	Δmfv	11.00
OPC-053 4-pin cord	Δmfv	11.00
PS-45 Compact 8A power supply		176.00
SM-6 Electret desk microphone		93.00
SM-8 2-connector desk mic w/up/down scan		145.00
SM-20 Stand mic for base stations		188.00
SP-3 External speaker		102.00
SP-5 Mobile speaker		39.00
SP-7 Small external speaker		68.00
SP-10 Slim-line external speaker		50.00
SP-12 Slim-line speaker w/visor clip		32.00
SP-20 Speaker w/audio filter		225.00
GP-22 GPS unit		656.00

\$20 coupon - GP-22 until gone!

INNOVA (INN)

06-1101 12vdc 6.5 amp/hour power pack	\$ 61.52	49⁹⁵
06-9509 AC/DC adapter	13.62	9⁹⁵
06-1130 Compact 12vdc 3 amp/hr pack/adapt	61.50	49⁹⁵

Hi! I'm Eddie, KD4RAZ...

So Habla Español

AES®

SERVICIOS INTERNACIONALES

1-407-898-1168

See p. 152



INTERFLEX (INT)

dspGOLD Software for AEA DSP-2232	f	\$129.95
KaGOLD DualPort Software for KPC/KAM	f	79.95
KaGOLD DualPort w/Pactor Soft; KPC/KAM	f	99.95
PkGOLD Enhanced Software; PK-88/232	f	79.95
PkGOLD w/Pactor Software for PK-232MBX	f	99.95
PkGOLD Dual Port w/Pactor For PK-88/232	f	149.95
PkGOLD/900 Software for PK-900	f	129.95

J-COM (JCO)

HB12 HamBase 1.2 5 1/4" IBM U.S. hams	Δm	\$ 49.95
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JPS (JPS)

ANC-4 Antenna noise canceller		\$175.00
NF-60 Auto DSP audio spectral notch filter		160.00
NIR-10 Dix noise/notch DSP bandpass filter ..		299.95
NIR-12 Dual DSP noise reduction/filter unit ..		349.95
NRF-7 Noise reducer and filter unit		219.95
NTR-1 Wide band noise and tone remover		169.95
SSTV-1 DSP slow scanTV filter	m	160.00
Power Pack 115vac/12vdc adapter		16.00

JRC (JRC)

CFL-232 500 Hz crystal IF filter; all	Δm	\$154.00
CFQ-3003 Transceive cable set	Δm	122.00
CFQ-3890 JST-135/JRL-2000F control cbl	Δm	68.00
CMH-742 Daughter board; JST-135	Δm	68.00
NBD-520 DC power supply; JST-135	Δm	399.00
NFG-230 Auto ant tuner; 135/135HP	Δm	717.00
NVT-58 Hand microphone; JST-135	Δm	40.00

JSC (JSC)

ROTOR CABLE

JRR-420 4-wire; U-105/U-110	Δw, per ft.	17¢
JRR-420	Δw, 100 ft. Roll	14 ⁹⁵
JRR-420	Δw, 500 ft. Roll	49 ⁹⁵
JRR-520 5-wire; AR-40	Δmw, per ft.	19¢
JRR-520	Δmw, 100 ft. Roll	16 ⁹⁵
JRR-520	Δmw, 500 ft. Roll	59 ⁹⁵
JRR-520	Δmw, 1000 ft. Roll	99 ⁹⁵

COAX ASSEMBLIES w/PL-259s

JFB-58-12LP 12' RG-58U, PL-259 - lugs	Δmfv	\$ 6.99
JFB-58-20LP 20' RG-58U, PL-259 to lugs	Δm	8.49
JFA-08Q-12LP 12' RG-8X, PL-259 - lugs	Δmf	7.95

K-COM (KCO)

RF-1 Modular telephone RFI filter		\$ 16.95
RF-1/2-line Two-line modular RFI filter		22.95
RF-1/coiled Coiled cord modular RFI filter		22.95
RF-2 Hard-wired telephone RFI filter		10.95

KLM (KLM)

ANTENNAS

160V 160, 80 or 40m vertical, 24' high	Δmfv	\$294.80
80M-1 80m rotatable dipole, 90' long	*T	966.90
80M-1R 80m rotatable dipole w/relays	*T	1358.50
80M-2 80m 2 el beam, 36' boom, 4 db	*T	3184.50
80M-2R 80m 2 el beam w/relays	*T	3939.10
80M-3 80m 3 el beam, 60' boom, 7 db	*T	4792.00
80M-3R 80m 3 el beam w/relays	*T	6285.40
SSV-80-40-15 80/40/15m vert, 65' high	*T	946.00
6-12-8LPA 6-12 MHz 8el LP, 36' boom	*T	2414.00
Heavy duty boom only for 6-12-8LPA	*T	490.00
6-12-8LPA w/Heavy duty boom	*T	2606.00
6-30-15LPA 6-30 MHz 15el LP, 46' boom	*T	3992.00
7.2/10-30-LPA 7,10-30MHz 8 el, 42' bm	*T	1325.00
Heavy duty boom only for 7.2/10-30-LPA	*T	454.00
7.2/10-30-LPA w/Heavy duty boom	*T	1747.00
40M-1 40m rotatable dipole, 46.5' boom	ΔTw	255.20
40M-2 40m 2 el beam, 16' boom, 4.9 db	*T	625.90
40M-3 40m 3 el beam, 32' boom, 6.5 db	*T	855.80
Heavy duty boom only for 40M-3	*T	336.00
40M-3 w/Heavy duty boom	*T	1104.40
40M-4 40m 4 el beam, 42' boom, 7.2 db	*T	1186.90
Heavy duty boom only for 40M-4	*T	454.00
40M-4 w/Heavy duty boom	*T	1559.80
40-10V 40/20/15/10m 26.5' vertical	Δm	365.20
10-30-7LPA 10-30MHz 7el LP, 30' bm, 7db	*T	1124.00
Heavy duty boom only for 10-30-7LPA	*T	443.00
10-30-7LPA w/Heavy duty boom	*T	1489.00
SK-8 Conv kit for 10-30 log w/o 40m dipole	*T	303.00

KLM - continued

SK-8/40M Conv kit for 10-30 log w/40m dipole	*T	456.00
KT-31 20-15-10m 24.5' rotatable dipole	Δmv	310.20
KT-34A 20-15-10m, 4 el, 16' boom, 7 db		616.00
KT-34A Upgrade kit - KT-34A to XA	Δmv	326.70
KT-34XA 20-15-10m, 6 el, 32' boom, 9 db		884.40
Heavy duty boom only for KT-34XA	*T	341.00
KT-34XA w/Heavy duty boom	*T	1095.60
20M-4 20m 4 el beam, 21' boom, 7.7 db	*T	530.20
20M-5 20m 5 el beam, 42' boom, 9.7 db	*T	820.60
Heavy duty boom only for 20M-5	*T	454.00
20M-5 w/Heavy duty boom	*T	1224.30
20M-6 20m 6 el beam, 57' boom, 11 db	*T	1180.30
Heavy duty boom only for 20M-6	*T	600.00
20M-6 w/Heavy duty boom	*T	1590.60
20-30-6LPA 20-30MHz, 6el LP, 19'bm, 7db	*T	383.00
17M-3 17m 3el beam, 16.75' bm, 6.5db	ΔTm	471.90
15M-4 15m 4 el beam, 14' boom, 7.7db	*T	281.60
15M-6 15m 6 el beam, 36' boom, 10.5db	*T	663.30
Heavy duty boom only for 15M-6	*T	369.00
15M-6 w/Heavy duty boom	*T	899.80
15M-6LD As 15M-6, but light duty	*T	498.30
12-17-30D WARC tri-band dipole	Δm	310.20
12-17-30V WARC tri-band vertical	Δm	162.80
10M-4 10m 4 el beam, 10' bm, 7.7 db	*T	257.40
10M-6 10m 6 el beam, 27.5' boom, 11 db	ΔTw	405.90
JV-10 10m 26' vertical antenna	Δmfv	119.00

Note: All KLM antennas supplied with a KLM balun/matching system, which is included in the price.

6M-5 6m 5 el beam, 11.75' boom, 9.7 db		255.20
6M-7LB 6m 7el, 25.75' bm, 11.5db	ΔTmwv	371.80
6M-7LD 6m 7 el beam, 20' boom, 10.5 db		293.70
6M-10 6m 10 el beam, 34' boom, 11.7 db	*T	493.90
6M-14 6m 14 el beam, 61' boom, 14 db	*T	685.30
JV-6 6m 15' vertical antenna, 3 db	Δmfv	126.00
2M-4X 2m 4 el rear mt beam, 4.2' bm, 8.5db		79.20
2M-8 2m 8 el beam, 7.25' boom, 10.3 db		124.30
2M-11X 2m 11 el beam, 15.33' bm, 12.5 db		106.70
2M-13LBA 2m 13 el beam, 21.5' bm, 13.3db		121.00
2M-14C 2m circ 14 el beam, 12.9' bm, 11db		206.80
2M-16LBXM 2m 16 el beam, 28' boom, 14.5db		235.00
2M-20LBX 2m 20 el beam, 38.5' boom		286.00
2M-22C 2m circ 22 el beam, 19' bm, 13 db		256.00
JV-2 2m 5' vertical antenna, 3 db		129.00
JV-2X 2m 11' vertical antenna, 5 db		176.00
220-7 220 7 el beam, 4.75' bm, 8.8 db		95.70
220-14X 220 14 el beam, 14.5' bm, 13.5db		138.60
220-22LBX 220 22el beam, 29.75'bm, 15.6db ..		174.90
JV-220X 220 7' vertical antenna, 5 db	Δmfv	163.00
432-20LBX 432 20 el beam, 12.33'bm, 15.3db ..		184.80
432-30LBX 432 30 el beam, 22'bm, 17.3db		216.70
435-18C 432 circ 18 el beam, 7'bm, 12 db		257.00
435-40CX 432 circ 40 el beam, 14.5'bm, 15.2db ..		278.00
440-6X 440 6 el beam, 2.33' boom, 8.9 db		63.00
440-10X 440 10 el beam, 5.33' bm, 11.2 db		76.00
440-16X 440 16 el beam, 10.33'bm, 14.2db		139.00
1.2-15LBX 1.2 GHz 15 el beam		115.50
1.2-24LBX 1.2 GHz 24 el beam		139.70
1.2-44LBX 1.2GHz 44el beam, 12'bm, 18.2db ..		194.70
CS-2 Extra 432 ant circularity switch		80.00

FIBERGLASS MASTS

5' 1 1/2" OD fiberglass mast		\$ 40.00
7-1/2' 1 1/2" OD fiberglass mast		50.00

COUPLERS/POWER DIVIDERS

440-2N 432 MHz - for 2 ants, w/type N		\$ 75.00
440-4N 432 MHz - for 4 ants, w/type N		90.00

FERRITE BALUNS

3-60-1:1 3-60 MHz 4kw PEP 1:1 balun		\$ 54.00
3-60-4:1 3-60 MHz 5kw PEP 4:1 balun		66.00
50-150-1:1 50-150MHz 500w PEP 1:1 bln	Δmw	56.00

*These antennas are drop-shipped (shipped direct to you from the KLM factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Monroe, Washington via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order antennas.

KANTRONICS (KAN) Reg Sale

D4-10 10w 440 MHz data radio	\$369.95	339 ⁹⁵
Data Engine TNC w/no modems	319.95	299 ⁹⁵
Data Engine w/DE-1200 modem	389.95	359 ⁹⁵
DE-1200 1200 baud modem	79.95	
DE-19K2/9K6 19,200/9600 baud modem ..	99.95	
Host Master II+ IBM software; Data Engine ..	69.95	
KPC-2 Packet Communicator II controller Dmwf	179.95	159 ⁹⁵
KPC-3 Small packet TNC w/32K RAM	119.95	
KPC-3/128K Small packet TNC w/128K RAM ..	144.95	139 ⁹⁵
KPC-9612 9600 baud controller/32K mem	219.95	199 ⁹⁵
128K 128K memory upgrade for KPC-9612 ..	24.95	
KPC-9612/128K 9600 controller/128K mem ..	239.95	219 ⁹⁵
KAM Plus All Mode Communicator	339.95	CALL
12VDC Adaptor 300ma adapt; KAM Plus/KPC3 ..	9.95	
Host Master 64 Software; C-64/128 Dmwf	69.95	64 ⁹⁵
Host Master II+ IBM software	69.95	
Host Master Mac Macintosh software	69.95	
Pactor Eeprom option; KAM (pre-V5) ....Dm	79.95	69 ⁹⁵
Pactor Eeprom option; KAM (version 5) ..Dm	59.95	49 ⁹⁵
Package 1 Enhancement board; KAM w/7.1E ..	89.95	
Package 2 7.1E upgrade; KAM enhance brd ..	34.95	
Package 3 7.1P upgrade; KAM Plus	34.95	
KPC-4 Dual port VHF packet Communicator ..	239.95	219 ⁹⁵
PC Combo Software for IBM	49.95	19 ⁹⁵
64/128 Combo Software for C-64/128 Dm	49.95	19 ⁹⁵
Superfax II WX FAX program for IBM	49.95	
G-TOR Book	15.95	
KTU Weathernode remote WX unit/temp sens	249.95	229 ⁹⁵
Anemometer Wind speed sensor	119.95	
Rain gauge	89.95	

KENWOOD (KEN)

TS-950SDX Dlx Xcvr w/keyer/DSP/filters	4799.95	CALL
CALL for latest Promotion - TS-950SDX		
DRU-2 Digital recording unit	139.95	129 ⁹⁵
IF-232C Level translator	124.95	119 ⁹⁵
MC-43S Extra 8-pin hand mic w/up-down ..	58.95	
MC-60A 8-pin amp desk mic w/up-down ..	151.95	141 ⁹⁵
MC-80 8-pin electret desk mic w/up-down ..	107.95	99 ⁹⁵
MC-85 Multi-function 8-pin elect desk mic ..	164.95	154 ⁹⁵
MC-90 2-head DSP desk microphone	254.95	224 ⁹⁵
SM-230 Station monitor w/pan display	1169.95	999 ⁹⁵
SP-950 External spkr w/audio filters	134.95	124 ⁹⁵
VS-2 Voice synthesizer	69.95	
YG-455CN-1 250 Hz CW filter (2nd IF)	179.95	164 ⁹⁵
YK-88CN-1 270 Hz CW filter (1st IF)	99.95	
YK-88SN-1 1.8 KHz SSB filter (1st IF)	99.95	
TS-850S 9-band Xcvr/1-30 MHz Rcvr/mic	1949.95	CALL
CALL for latest Promotion - TS-850S		
AT-850 Internal auto antenna tuner	249.95	219 ⁹⁵
TS-850S/AT 9-band Xcvr/1-30 MHz Rcvr/tuner ..	2149.95	CALL
CALL for latest Promotion - TS-850S/AT		
AT-300 External auto antenna tuner	689.95	599 ⁹⁵
DRU-2 Digital recording unit	139.95	129 ⁹⁵
DSP-100 External dig sig processor	669.95	579 ⁹⁵
IF-232C Level translator	124.95	119 ⁹⁵
MC-43S Extra 8-pin hand mic w/up-down ..	58.95	
MC-60A 8-pin amp desk mic w/up-down ..	151.95	141 ⁹⁵
MC-80 8-pin electret desk mic w/up-down ..	107.95	99 ⁹⁵
MC-85 Multi-function 8-pin elect desk mic ..	164.95	154 ⁹⁵
MC-90 2-head DSP desk microphone	254.95	224 ⁹⁵
PG-2X Heavy duty DC cable	34.95	
PS-52 Heavy duty power supply	299.95	259 ⁹⁵
RM-1 Remote control unit	54.95	
SM-230 Station monitor w/pan display	1169.95	999 ⁹⁵
SO-2 TCXO unit	184.95	174 ⁹⁵
SP-31 External speaker	99.95	
VS-2 Voice synthesizer	69.95	
YG-455C-1 500 Hz CW filter (2nd IF)	164.95	154 ⁹⁵

KENWOOD - continued Reg Sale

YG-455CN-1 250 Hz CW filter (2nd IF)	179.95	164 ⁹⁵
YK-88C-1 500 Hz CW filter (1st IF)	114.95	109 ⁹⁵
YK-88CN-1 270 Hz CW filter (1st IF)	99.95	
YK-88SN-1 1.8 KHz SSB filter (1st IF)	99.95	
TS-450S 9-band Xcvr/SW Rcvr/mic	1439.95	CALL
CALL for latest Promotion - TS-450S		
TS-690S 9-band Xcvr w/6m/SW Rcvr/mic	1759.95	CALL
AT-450 Internal 80-10m auto tuner	249.95	219 ⁹⁵
TS-450S/AT 9-band Xcvr/SW Rcvr/tuner/mic ..	1639.95	CALL
CALL for latest Promotion - TS-450S/AT		
AT-50 External auto tuner	369.95	319 ⁹⁵
PG-4M 18' extension cable for AT-50	29.95	
AT-300 External auto antenna tuner	689.95	599 ⁹⁵
DSP-100 External dig sig processor	669.95	579 ⁹⁵
IF-232C Level translator	124.95	119 ⁹⁵
MB-430 Mobile mounting bracket	47.95	
MC-43S Extra 8-pin hand mic w/up-down ..	58.95	
MC-60A 8-pin amp desk mic w/up-down ..	151.95	141 ⁹⁵
MC-80 8-pin electret desk mic w/up-down ..	107.95	99 ⁹⁵
MC-85 Multi-function 8-pin elect desk mic ..	164.95	154 ⁹⁵
MC-90 2-head DSP desk microphone	254.95	224 ⁹⁵
PG-2X Heavy duty DC cable	34.95	
PS-33 Light duty 20.5A power supply	239.95	209 ⁹⁵
PS-53 Heavy duty 22.5A power supply	279.95	239 ⁹⁵
SO-2 TCXO unit	184.95	174 ⁹⁵
SP-23 External speaker	87.95	
TU-8 CTCSS tone unit	52.95	
VS-2 Voice synthesizer	69.95	
YG-455C-1 500 Hz CW filter (2nd IF)	164.95	154 ⁹⁵
YG-455CN-1 250 Hz CW filter (2nd IF)	179.95	164 ⁹⁵
YK-88C-1 500 Hz CW filter (1st IF)	114.95	109 ⁹⁵
YK-88CN-1 270 Hz CW filter (1st IF)	99.95	
YK-88S-1 2.4 KHz SSB filter (1st IF)	104.95	99 ⁹⁵
YK-88SN-1 1.8 KHz SSB filter (1st IF)	99.95	
YK-455C-1 500 Hz CW filter	114.95	109 ⁹⁵
TS-50S Compact HF Xcvr/SW Rcvr/mic/mt	1339.95	CALL
CALL for latest Promotion - TS-50S		
TS-60S Compact 6m Xcvr/mic/mt	1239.95	CALL
CALL for latest Promotion - TS-60S		
AT-50 External HF auto tuner	369.95	319 ⁹⁵
PG-4M 18' extension cable for AT-50	29.95	
AT-300 External HF auto antenna tuner	689.95	599 ⁹⁵
IF-100 Computer interface	79.95	
IF-232C Level translator	124.95	119 ⁹⁵
MB-13 Deluxe quick release mtg bracket ..	52.95	
MC-47 Extra multi-func 8-pin hand mic ..	58.95	
MC-60A 8-pin amp desk mic w/up-down ..	151.95	141 ⁹⁵
MC-80 8-pin electret desk mic w/up-down ..	107.95	99 ⁹⁵
MC-85 Multi-function 8-pin elect desk mic ..	164.95	154 ⁹⁵
PG-2Y DC cable	38.95	
PS-33 Light duty 20.5A power supply	239.95	209 ⁹⁵
PS-53 Heavy duty 22.5A power supply	279.95	239 ⁹⁵
SO-2 TCXO unit	184.95	174 ⁹⁵
SP-23 External speaker	87.95	
YK-107C 500 Hz CW filter	114.95	109 ⁹⁵
TS-140S 9-band Xcvr/5-30 MHz Rcvr/mic	1109.95	CALL
AT-50 External auto tuner	369.95	319 ⁹⁵
PG-4M 18' extension cable for AT-50	29.95	
MB-430 Mobile mounting bracket	47.95	
MC-43S Extra 8-pin hand mic w/up-down ..	58.95	
MC-60A 8-pin amp desk mic w/up-down ..	151.95	141 ⁹⁵
MC-80 8-pin electret desk mic w/up-down ..	107.95	99 ⁹⁵
MC-85 Multi-function 8-pin elect desk mic ..	164.95	154 ⁹⁵
PG-2X Heavy duty DC cable	34.95	
PS-33 Light duty 20.5A power supply	239.95	209 ⁹⁵
SP-23 External speaker	87.95	
TU-8 CTCSS tone unit	52.95	
YG-455C-1 500 Hz CW filter	164.95	154 ⁹⁵
YK-455C-1 500 Hz CW filter	114.95	109 ⁹⁵
TL-922A 2kw PEP linear (3-500Zs) ....Dmwf	2199.95	1869
YG-455S-1 2.4KHz SSB filter; 950S	152.95	6 ⁹⁵
R-5000 100 KHz-30 MHz digital receiver	1209.95	CALL
DCK-2 DC cable kit w/cig plug	12.95	
IC-10 IC kit for computer control	42.95	
IF-232C Level translator	124.95	119 ⁹⁵
MB-430 Mobile mounting bracket	47.95	
SP-23 External speaker	87.95	
VC-20 108-174 MHz VHF converter	229.95	199 ⁹⁵

KENWOOD - continued Reg Sale

VS-1 Voice synthesizer	69.95	
YK-88A-1 AM filter	104.95	99 ⁹⁵
YK-88C 500 Hz CW filter	104.95	99 ⁹⁵
YK-88CN 270 Hz CW filter	104.95	99 ⁹⁵
YK-88SN 1.8 KHz SSB filter	104.95	99 ⁹⁵
HS-5 Deluxe headphones	79.95	
HS-6 Lightweight headphones	59.95	
HW-3 Version 2.3 3 1/2" HamWindows IBM soft	139.95	129 ⁹⁵
LF-30A 1kw PEP low pass filter	59.95	
MA-5 5-band 200w PEP HF mobile antenna ..	179.95	164 ⁹⁵
VP-1 Hvy duty chrome spg, bpr mt for MA-5 ..	64.95	
MC-43S 8-pin hand mic w/up-down switch ..	58.95	
MC-60A 8-pin amp desk mic w/up-down ..	151.95	141 ⁹⁵
MC-80 8-pin electret desk mic w/up-down ..	107.95	99 ⁹⁵
MC-85 Multi-function 8-pin electret desk mic	164.95	154 ⁹⁵
MJ-48 4-pin mic to 8-pin Xcvr adapt ....Δmw	15.95	12 ⁹⁵
MJ-64 6-pin mic to 4-pin Xcvr adapt ....Dm	14.95	1 ⁹⁵
PG-48 Adapt cord; MC-60A - 6-pin Xcvr	21.95	4 ⁹⁵
E30-1765-08 Adapt cord; MC-85 - 8-pin Xcvr	21.95	
PC-1A 8-pin phone patch	134.95	124 ⁹⁵
PG-3B 15A DC line noise filter	29.95	
PG-3G 25A DC line noise filter	49.95	
RCS-1 Radio Construction Set IBM soft ....Δmfv	49.95	29 ⁹⁵
SP-41 Compact external speaker	48.95	
SP-50B High quality external mobile speaker	52.95	
SW-2100 1.8-30MHz 2kw SWR/power meter ..	169.95	149 ⁹⁵
TU-7 Prog encoder; TR-751A	49.95	
TM-255A 40w 2m SSB/FM Xcvr/9600 baud ..	1109.95	CALL
CALL for latest Promotion - TM-255A		
TM-455A 35w 430-440 SSB/FM Xcvr/9600	1279.95	CALL
CALL for latest Promotion - TM-455A		
DFK-3 9' separate display cable kit	24.95	
DFK-4 13' remote cable kit	54.95	
DFK-7A Deluxe 22' remote cable kit	89.95	
PG-5A Packet data cable	14.95	
TSU-8 CTCSS decoder	55.95	
TS-790A 45w 2m/40w 440 SSB/FM Xcvr/mic ..	2199.95	CALL
IF-232C Level translator	124.95	119 ⁹⁵
MC-43S Extra 8-pin hand mic w/up-down ..	58.95	
MC-60A 8-pin amp desk mic w/up-down ..	151.95	141 ⁹⁵
MC-80 8-pin electret desk mic w/up-down ..	107.95	99 ⁹⁵
MC-85 Multi-function 8-pin elect desk mic ..	164.95	154 ⁹⁵
PG-2X Heavy duty DC cable	34.95	
PS-31 Power supply	219.95	189 ⁹⁵
SP-31 External speaker	99.95	
TSU-5 Programmable CTCSS decoder	63.95	
UT-10 10w 1.2 GHz module	629.95	539 ⁹⁵
VS-2 Voice synthesizer	69.95	
TM-642A 2m/220 FM Xcvr w/TTP	939.95	CALL
TM-742A 50/35w 2m/440 FM Xcvr w/TTP	939.95	CALL
CALL for latest Promotion - TM-742A		
TM-942A 50/35/10w 2m/440/1.2 FM/TTP	1309.95	CALL
DFK-3 9' separate display cable kit	24.95	
DFK-4 13' remote cable kit	54.95	
DFK-7 Deluxe 22' remote cable kit	84.95	
MJ-88 Modular to 8-pin mic adapter	29.95	
MJ-89 Modular mic switch	67.95	
TSU-7 CTCSS decoder unit	58.95	
UT-28S 50w 10m unit	339.95	289 ⁹⁵
UT-50S 50w 6m unit	369.95	319 ⁹⁵
UT-220S 25w 220 MHz unit	369.95	319 ⁹⁵
UT-440S 35w 440 MHz unit	339.95	289 ⁹⁵
UT-1200 10w 1.2 GHz unit	459.95	399 ⁹⁵
TM-733A 50/35w 2m/440 FM Xcvr/TTP/9600 ..	779.95	CALL
CALL for latest Promotion - TM-733A		
DFK-3B 9' separate display cable kit	37.95	
DFK-4B 13' remote cable kit	59.95	
DFK-7B Deluxe 22' remote cable kit	99.95	
PG-5A Packet data cable	14.95	
TSU-8 CTCSS decoder	55.95	
MA-700 3db 2m/5.5db 440 ant w/duplexer ..	104.95	99 ⁹⁵
Larsen PO-K Roof mt, coax; MA-700	24.00	
Larsen PO-MM Magnet mt, coax; MA-700 ..	31.70	
Larsen PO-TLM Trunk lip mt, coax; MA-700 ..	27.30	
TM-241A 50w 2m FM Xcvr w/TTP mic	459.95	CALL
CALL for latest Promotion - TM-241A		
TM-331A 25w 220 FM Xcvr w/TTP mic	569.95	CALL

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KENWOOD - continued

TM-441A 35w 440 FM Xcvt w/TTP mic	569.95	CALL
TM-541A 10w 1.2GHz FM Xcvt w/TTP mic	649.95	CALL
DRU-1 Digital recorder	125.95	99 ⁹⁵
DTU-2 Digital paging unit	29.95	
PG-4J Extension cable kit for IF-20	47.95	14 ⁹⁵
KQT-8/TSU-6 Prog CTCSS decoder	46.95	
MC-44DM Extra multi-function TTP mic	74.95	
PG-4G Extra control cable	22.95	6 ⁹⁵
TM-251A 50w 2m FM Xcvt/TTP/9600 baud	529.95	CALL

CALL for latest Promotion - TM-251A

TM-451A 35w 440 FM Xcvt/TTP/9600 baud	589.95	CALL
MC-45DM Extra multi-function TTP mic	79.95	
ME-1 Memory expansion	38.95	
PG-5A Packet data cable	14.95	
TSU-8 CTCSS decoder	55.95	
MC-48B Up-down 8-pin TTP microphone	83.95	

Accessories: TH-A/B/2600A/3600A/2500/3500

DC-26 DC adapter; TR-2600A/3600A	\$ 37.95	19 ⁹⁵
RA-9B 220 BNC stubby duck	18.95	2 ⁹⁵
PB-24 Nicad batt w/cgr adapt; 2400	54.95	49 ⁹⁵

Accessories for TH-225A/315A/415A/205AT

KNB-4/PB-4 1600ma 7.2v (1.5w) batt	\$ 76.95	69 ⁹⁵
PB-3 800ma 7.2v battery	62.95	19 ⁹⁵
SC-27 Soft case for PB-12; 225A	19.50	1 ⁹⁵

Accessories for TH-75A/77A/25AT/26AT

BC-2 Wall charger for PB-10	\$ 22.95	2 ⁹⁵
BT-6 6-AA battery case	26.95	
DC-1 DC adapter	26.95	1 ⁹⁵
PG-3E Cig cord w/filter for DC-1	34.95	
DC-4 Mobile charger for PB-10	20.95	1 ⁹⁵
KNB-5A 800ma 7.2v battery	58.95	
KNB-6A 1600ma 7.2v (2.5/2w) battery	97.50	
KNB-7A 800ma 12v (5w) batt (not 55AT)	76.95	
KQT-8/TSU-6 CTCSS encoder/decoder	46.95	
KSC-8/BC-10 Compact charger	38.95	29 ⁹⁵
KSC-12/KSC-7/BC-11 Rapid charger	99.95	79 ⁹⁵
KVC-1/DC-5 Mobile cgr for PB-6/7/9	33.95	19 ⁹⁵
KWR-1/WR-1 Water resistant bag	22.00	14 ⁹⁵
PB-5 200ma 7.2v (2.5/2w) battery	59.95	6 ⁹⁵
SC-14 Soft case for PB-5; 25/45AT	25.95	1 ⁹⁵
SC-17 Soft case for PB-5 w/55AT	22.95	95 [¢]

Accessories for TH-26AT/46AT

SC-24 Soft case for PB-5/BT-7	\$ 22.95	2 ⁹⁵
SC-26 Soft case for PB-7/8/9	22.95	1 ⁰⁰

Accessories for TH-27A/47A

BC-14 Extra wall charger for PB-13	\$ 24.95	
SC-32 Soft case for PB-14	21.95	6 ⁹⁵
TH-28A 2.5w 2m FM HT/batt/cgr/TTP	399.95	CALL

CALL for latest Promotion - TH-28A

TH-48A 2w 440 FM HT/batt/cgr/TTP	459.95	CALL
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Accessories for TH-28A/48A/78A

BC-15A Rapid charger for PB-13/14/17/18	\$114.95	
BH-6 Swivel mount	39.95	
BT-8 AA alkaline battery case	26.95	
EMC-1 Lapel clip mic/ear piece	41.95	
HMC-2 VOX/boom mic headset	69.95	
KLF-3/PG-3F Cig cord w/filter	23.50	
ME-1 Memory expansion	38.95	
PB-13 700ma 7.2v battery	63.95	
PB-14 300ma 12v (5w) battery	89.95	
PB-17 700ma 12v (5w) battery	99.95	
PB-18 1100ma 7.2v battery	86.95	
PG-2W DC cable w/fuse	15.95	
PG-3H Cig lighter cord w/filter	34.95	
RA-3 2m BNC 3/4 wave telescopic antenna	22.95	
RA-5 2m 1/4 wv/440 3/4 wv BNC tele ant	28.95	
SC-33 Small soft case; 28A/48A	22.95	
SC-34 Large soft case; 28A/48A	22.95	
SC-35 Regular soft case; 78A	19.95	



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KENWOOD - continued

SC-36 Large soft case; 78A	21.95	
SMC-32 Mini water resistant rt angle spkr/mic	48.95	
SMC-33 Speaker/mic w/remote control	62.95	
SMC-34 Spkr/mic w/vol cont & function keys	64.95	
WR-2 Water resistant bag	29.95	
TH-22AT 3w 2m FM HT/batt/cgr/TTP	369.95	CALL

CALL for latest Promotion - TH-22AT

99 cent Cordura case - TH-22AT until gone!

TH-42AT 2.5w 440 FM HT/batt/cgr/TTP	389.95	CALL
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99 cent Cordura case - TH-42AT until gone!

TH-79A(D) 2.7w 2m/440 FM HT/batt/cgr/TTP	629.95	CALL
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CALL for latest Promotion - TH-79A(D)

99 cent Cordura case - TH-79A(D) until gone!

\$4.99 Glove leather case - TH-79A(D) thru 6/30/95

TH-79A(D)H 5w 2m/440 FM HT/batt/cgr/TTP	649.95	CALL
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CALL for latest Promotion - TH-79A(D)H

99 cent Cordura case - TH-79A(D)H until gone!

\$4.99 Glove leather case - TH-79A(D)H thru 6/30/95

BH-6 Swivel mount	39.95	
BT-9 4-AA battery holder	26.95	
EMC-1 Lapel clip mic/ear piece	41.95	
HMC-2 VOX/boom mic headset	69.95	
KSC-8A Drop-in cgr; 25/26/75/77/22/79	24.95	
KSC-14 2-pack rapid charger	84.95	
PB-32 600ma 6v battery	64.95	
PB-33 1200ma 6v battery	89.95	
PB-34 600ma 9.6v (5w) battery	89.95	
PG-2W DC cable w/fuse	15.95	
PG-3H Cig lighter cord w/filter	34.95	
RA-3 2m BNC 3/4 wave telescopic antenna	22.95	
RA-5 2m 1/4 wv/440 3/4 wv BNC tele ant	28.95	
SC-37 Soft case; TH-22/42AT w/PB-30/32	22.95	
SC-39 Soft case; TH-22/42AT w/PB-33/34	22.95	
SC-41 Soft case; TH-79A w/PB-32	22.95	
SC-43 Soft case; TH-79A w/PB-33/34	22.95	
SMC-31 Speaker/mic/rt angle plug	59.95	
SMC-32 Mini water resist rt angle spkr/mic	48.95	
SMC-33 Speaker/mic w/remote control	62.95	
SMC-34 Spkr/mic w/vol cont/function keys	64.95	
TSU-8 CTCSS decoder; TH-22/42AT	55.95	
WR-2 Water resistant bag	29.95	

LARSEN (LAR)

27-31 MHz ANTENNAS

NLA-27 10m ant only (no mount)	Dwfv \$ 38.90	29 ⁹⁵
NMO-27 10m ant only (no mount)	Dmwfv 32.25	28 ⁹⁵
NMO-27C 10m ant only (no mount)	33.50	29 ⁹⁵

47-54 MHz ANTENNAS

NLA-50 6m ant only (no mount)	Dv \$ 38.90	29 ⁹⁵
NMO-50 6m ant only (no mount)	Dmwfv 32.25	28 ⁹⁵
NMO-50C 6m ant only (no mount)	33.50	29 ⁹⁵

144-174 MHz ANTENNAS

NLA-150 2m ant only (no mt), 3 db	Dmwv \$ 38.00	29 ⁹⁵
NMO-150 2m ant only (no mt), 3 db	Dmwfv 29.40	26 ⁹⁵
NMO-150B 2m black ant only (no mt), 3 db	33.20	29 ⁹⁵
NMO-150C 2m ant only (no mount), 3 db	30.70	27 ⁹⁵
OM-150-K 2m no gnd plane ant, 2 db	Dmw 45.85	19 ⁹⁵

220-265 MHz ANTENNAS

NLA-220 220 ant only (no mt), 3 db	Dmwfv \$ 36.35	24 ⁹⁵
NMO-220 220 ant only (no mt), 3 db	Dmf 31.10	27 ⁹⁵
NMO-220C 220 ant only (no mount), 3 db	30.00	26 ⁹⁵
OM-220-K 220 no gnd plane ant, 2 db	Dwv 47.50	19 ⁹⁵

440-460 MHz ANTENNAS

NLA-440 440 ant only (no mt), 5 db	Dmwfv \$ 34.85	24 ⁹⁵
NMO-440 440 ant only (no mt), 5 db	Dmwfv 28.15	25 ⁹⁵
NMO-440B 440 black ant only (no mt), 5 db	35.80	32 ⁹⁵
NMO-440C 440 ant only (no mount), 5 db	29.30	26 ⁹⁵
OM-440-K 440 no gnd plane ant, 2 db	Dmv 52.15	19 ⁹⁵
NLA-2/70 2m/440 ant (no mt), 2/4db	Dmw 51.15	39 ⁹⁵
MM-2/70 2m/440 1/4 wave/2db mag mt ant	42.00	37 ⁹⁵
NMO-2/70 2m/440 ant (no mt), 2/4db	Dmwfv 46.65	41 ⁹⁵
NMO-2/70C 2m/440 ant (no mount), 2/4db	48.50	43 ⁹⁵
NMO-2/70-SH 2m/440 ant (no mt), 1/4 wv/2db	37.83	33 ⁹⁵
NLAQ 136-512 MHz 1/4 wv ant (no mt)	Dmwfv 14.40	12 ⁹⁵
NMOQ-Spec 136-512 MHz 1/4 wave ant (no mt)	9.70	

LARSEN - continued

NMOQ-Spec-B 136-512 black 1/4 wv ant (no mt)	13.20	
NMOQ-Spec-K 136-512MHz 1/4 wv 3/4" hole ant	23.20	
NMO-1290B 1.2 GHz black ant only (no mt)	32.00	28 ⁹⁵
FB1-136 Base station 136-230 MHz ant	132.50	119 ⁹⁵

ON GLASS ANTENNAS

KG-144-PL 2m 3 db on glass antenna	Dwfv \$ 61.35	49 ⁹⁵
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KG-144-UD-PL 2m 3 db on glass antenna	67.30	60 ⁹⁵
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KG-220-UD-PL 220 3 db on glass antenna	67.30	60 ⁹⁵
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KG-440-N 440 2.4 db N on glass ant	Dwv 54.15	29 ⁹⁵
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KG-440-PL 440 2.4 db on glass ant	Dwfv 49.15	34 ⁹⁵
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KG-440-UD-PL 440 2.4 db on glass antenna	54.70	49 ⁹⁵
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KG-2/70-UD-PL 2m/440 2.5/4.5db on glass	91.80	82 ⁹⁵
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KG-Reinstall Reinstall kit for KG-ants	5.20	
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KULDUCKIES - For Hand-holds

KD4-146 2m BNC Kulduckie	\$ 17.30	
KD4-2/70 2m/440 BNC Kulduckie	27.70	
KD4-222 220 BNC Kulduckie	17.30	
KD4-445 440 short BNC Kulduckie	Δmwv 17.30	6 ⁹⁵
KD14-445 440 1/4 wave BNC Kulduckie	17.30	
KD4-146-HQ 2m part helical, part 1/4 wave BNC	21.50	
KD14-2M-HW 2m 1/2 wave BNC antenna	33.80	
KD14-440-HW 440 1/2 wave BNC antenna	33.80	

ACCESSORIES & REPLACEMENT PARTS

AD-2/70 100w 2m/440 duplexer	\$ 69.20	62 ⁹⁵
BSA-K Base station mounting kit	Δmwv 46.70	29 ⁹⁵
CRK NLA contact replacement kit	Δmw 2.00	1 ⁴⁹
NLA-150-CO Extra coil for NLA-150	Dmw 28.85	19 ⁹⁵
NLA-220-CO Extra coil for NLA-220	Dw 27.15	19 ⁹⁵
NLA-B 3/4" snap mt only for NLA ant	Dwfv 4.25	3 ⁹⁵
NLA-CAP Rain cap for NLA mount	Dmf 3.25	2 ⁹⁵
NLA-K 3/4" snap mt kit w/coax; NLA ant	Dmw 12.50	
NLA-MM Magnet mt, coax for NLA ant	Dm 30.40	
NLA-TLM Tnk lip mt, coax for NLA ant	Dmw 26.40	19 ⁹⁵
NMO-150-CO Extra coil for NMO-150	Dmw 20.25	18 ⁹⁵
NMO-150-BCO Extra blk coil; NMO150B	Δmw 21.00	18 ⁹⁵
NMO-220-CO Extra coil for NMO-220	Dmw 21.90	16 ⁹⁵
NMO-CAP Rain cap for NMO mount	Dwfv 3.25	2 ⁹⁵
NMO-CAP-B Black rain cap for NMO mount	3.30	
NMO-K 3/4" hole mt w/coax for NMO ant	13.50	
NMO-MM Magnet mt, coax for NMO ant	29.80	
NMO-TLM Tnk lip mt, coax; NMO ant	Dmwfv 23.60	
NMO-TLM-B Bk tnk lip mt, coax; NMO ant	Dmf 25.35	
NMO-TLP Low profile tnk lid mt, coax; NMO ant	26.50	
PO-K Roof mt, coax for SO-239 ant	24.00	
PO-MM Magnet mt, coax for SO-239 ant	31.70	
PO-TLM Trunk lip mt, coax for SO-239 ant	27.30	
RG-NLA Extra NLA rubber gaskets (3)	Dmwv 2.10	1 ⁹⁵
RG-SS Extra super seal NMO gaskets (3)	3.00	
SPRING Shock spring	6.80	
TMB-34 Trunk mtg bkt for NMO antenna	4.70	
TMB-34B Black trunk mtg bkt for NMO ant	6.80	
TMB-38 Trunk mtg bkt for NLA ant	Δmf 4.70	3 ⁹⁵
TMB-38B Black trunk mtg bkt for NLA	Δmf 6.80	3 ⁹⁵
W-154 Extra closed coil whip; 440 ant	Δmf 17.80	9 ⁹⁵
W-490 49" whip	9.50	
W-490B Black 49" whip	12.00	

MFJ ANTENNA TUNERS (MFJ)

989C Dlx 3kw PEP w/roller inductor	\$349.95	299 ⁹⁵
986 3kw PEP w/roller inductor	289.95	259 ⁹⁵
962C 1.5kw PEP/meter/switch/balun	229.95	209 ⁹⁵
949E/949EY 300w/meter/dummy/sw/balun/ps	139.95	129 ⁹⁵
948 300w/meter/switch/balun	129.95	119 ⁹⁵
941E 300w w/meter, switch, balun	109.95	99 ⁹⁵
945D 300w tuner w/meter	89.95	84 ⁹⁵
20 Mobile bracket for 945D	4.95	
934 300w tuner w/artificial ground	169.95	159 ⁹⁵
901B Versa Tuner 200w ant tuner	59.95	
16010 200w random wire tuner	39.95	
910 80-10m mobile antenna matcher	19.95	
921 2m/220 300w PEP tuner/SWR/wattmeter	69.95	
924 440 MHz 300w PEP tuner/SWR/wattmeter	69.95	

MEMORY KEYS

451 Dedicated CW keyboard w/memory	\$ 99.95	94 ⁹⁵
451X Morse keyboard interface only	79.95	74 ⁹⁵
452 CW keyboard/keyst w/disp/keyboard	129.95	119 ⁹⁵

MFJ - continued

452X CW keyboard/keyst w/disp, no keyboard	99.95	89 ⁹⁵
498 Dlx CW keyboard/keyst w/disp/keyboard	179.95	169 ⁹⁵
498X Dlx CW keyboard w/disp, no keyboard	159.95	149 ⁹⁵
77 Wired remote control for 486	19.95	9 ⁹⁵
484C 12 25-char/25-100 char msg	149.95	69 ⁹⁵
75 Remote pad for 484C	14.95	10 ⁹⁵
490 492 keyer/Benchr paddle combination	164.95	149 ⁹⁵
490X 492 keyer for use w/Benchr or 564	109.95	99 ⁹⁵
564 Deluxe iambic paddle for 490X	49.95	
492 192 char menu driven memory keyer	99.95	89 ⁹⁵
80 8000 char memory expansion for 492	14.95	
492X Memory keyer w/8000 char expansion	114.95	104 ⁹⁵
78 Remote control for 492/492X	19.95	
493 32,000 char menu driven mem keyer	139.95	129 ⁹⁵
79 Remote control for 493	19.95	
551 IBM AT-101 keyboard for 493	39.95	
5409 493 9-pin serial port 6' cable	12.95	
5425 493 25-pin serial port 6' cable	12.95	

ELECTRONIC KEYS

407C Deluxe electronic keyer	\$ 69.95	64 ⁹⁵
401C Econo keyer	49.95	

KEYER/PADDLES

422C Keyer/Benchr paddle combination	\$134.95	124 ⁹⁵
422CX Keyer only	79.95	74 ⁹⁵
1305 5vdc power supply	12.95	
564 Deluxe iambic paddle for 422BX	49.95	

COMPUTER INTERFACES

1224 Interface	\$ 99.95	94 ⁹⁵
1264 Tape software for VIC/C64; 1224 Δmf	19.95	14 ⁹⁵
1265 Disk software for VIC/C64; 1224	19.95	
1285 Software for IBM; 1224	19.95	
1225 Receive only interface	69.95	64 ⁹⁵
1264B Tape software; VIC/C64; 1225 Δmf	19.95	9 ⁹⁵
1265B Disk software; VIC/C64; 1225 Δmf	19.95	9 ⁹⁵
1285B Software for IBM; 1225	19.95	
1270C Packet radio TNC2	119.95	109 ⁹⁵
47A Mailbox 32K mem board; 1270/1274	49.95	
47B Mailbox 128K mem board; 1270/1274	69.95	
47C Mailbox 512K mem board; 1270/1274	239.95	209 ⁹⁵
2400 2400 baud modem	89.95	
9600 9600 baud modem	109.95	104 ⁹⁵
1270CT Turbo packet w/2400 baud	209.95	179 ⁹⁵
1270CQ Packet w/9600 baud modem	229.95	199 ⁹⁵
1274CT Turbo controller w/2400 baud	229.95	149 ⁹⁵
1276 Packet/Pactor controller	159.95	149 ⁹⁵
1276T Packet/Pactor Turbo controller	249.95	229 ⁹⁵
1278B Multi-mode controller w/Pactor	299.95	269 ⁹⁵
1278B/DSP Controller w/Pactor & DSP	379.95	349 ⁹⁵
45A 32K RAM IC only	14.95	
45B 128K RAM IC only	34.95	
45C 512K RAM IC only	219.95	189 ⁹⁵
48 1278 upgrade	24.95	
48B 1278B upgrade	24.95	
48E 1278 packet encryption EPROM	29.95	
48X 1278 expanded mailbox firmware	24.95	
52 TNC2 deviation meter board	29.95	
56A Pactor/mailbox 32K board for 1278B	69.95	
56B Pactor/mailbox 128K board for 1278B	89.95	
56C Pactor/mailbox 512K board; 1278B	239.95	209 ⁹⁵
780 DSP data filter for 1278B	99.95	94 ⁹⁵
2400 2400 baud modem	89.95	
9600 9600 baud modem	109.95	104 ⁹⁵
1278T Turbo controller/2400 baud	359.95	249 ⁹⁵
1278BT Turbo controller/2400 baud/Pactor	369.95	339 ⁹⁵

MFJ - continued

1282 C64 starter pack	24.95	
1282B Multicom package; C64/128	39.95	
1282BD Multicom 64 disk only	29.95	
1283 Tape software; C64 & VIC-20 Δfv	24.95	18 ⁹⁵
1284 5 1/4" IBM starter pack	24.95	
1284D 1284 disk only	14.95	
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1290 Amiga multicom starter pack Δv	49.95	39 ⁹⁵
1290D 1290 disk only Δmv	39.95	24 ⁹⁵
1214PC Multimode interface for IBM	149.95	139 ⁹⁵
59 1214 5 1/4" software upgrade	29.95	
59M 1214 3 1/2" software upgrade	29.95	
40B TNC2 upgrade 32K/RAM	39.95	
40C TNC2 upgrade 32K	19.95	
40CX TNC2 upgrade; expanded RAM mailbox	19.95	
40E TNC2 packet encryption EPROM	29.95	
43 Real time clock for TNC	29.95	
44 Plug-in scope tuning adapter	29.95	
44X Scope tuning adapter; 1278 & others	49.95	
1271 Packet card for C64/128	49.95	
1272B TNC to microphone interface	34.95	
1272BX TNC/mic switch; PK-232	39.95	
1272BYH TNC/mic switch; KAM HF	39.95	
1272BYV TNC/mic switch; KAM VHF	39.95	
1272BZ TNC/mic switch; PK-88	39.95	
1272M TNC/mic RJ-45 switch; MFJ/PK-900	34.95	
1272MX TNC/mic RJ-45 switch; PK-232	39.95	
1272MYH TNC/mic RJ-45 switch; KAM HF	39.95	
1272MYV TNC/mic RJ-45 sw; KAM VHF; KPC3	39.95	
1272MZ TNC/mic RJ-45 switch; PK-88	39.95	
1273 Packet tuning indicator Dmwf	49.95	24 ⁹⁵

SSB/CW FILTERS

722 SSB/CW notch filter	\$ 79.95	74 ⁹⁵
752C Dual tunable SSB/CW filter	99.95	94 ⁹⁵
784 Super DSP filter	219.95	199 ⁹⁵

PHONE PATCH

624D Phone patch w/audio VU meter	\$ 89.95	84 ⁹⁵
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DUMMY LOADS

250 2kw PEP dummy load w/oil	\$ 49.95	
250X 2kw PEP dummy load, less oil	29.95	
260B 300w 0-150MHz dry dummy load Dmwf	29.95	
260C 300w 0-150 MHz dry dummy load	29.95	
260BN 300w 0-150 MHz type N dry dummy	34.95	
264 1.5kw 0-650 MHz dry dummy load	59.95	
264N 1.5kw 0-650 MHz type N dry dummy	69.95	

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812B 14-170 MHz SWR/FS/wattmeter	\$ 29.95	
815B 160-6m cross-needle SWR/wattmeter	69.95	
816 1.8-30 MHz toroidal SWR/wattmeter	29.95	
817 2m/440 cross needle meter	79.95	74 ⁹⁵
840 2m 5w wattmeter/dummy load for HT	19.95	
841 2m 5w in-line HT wattmeter/SWR	39.95	
860 1.8-60 MHz cross-needle meter	39.95	
862 2m/220/440 cross-needle meter	39.95	
864 1.8-60MHz/2m/220/440 cross needle meter	59.95	

MFJ - continued

SHORTWAVE ACCESSORIES		
306 Car radio SWL converter	\$ 79.95	74 ⁹⁵
956 LW/MW/SW preselector/tuner	39.95	
959B Receiver ant tuner w/preamp	89.95	
1020A 3-30 MHz indoor active rcv ant	79.95	
1022 300KHz-200MHz active rcv antenna	39.95	
1024 .05-30 MHz outdoor active rcv ant	129.95	119 ⁹⁵
1040B Deluxe receiver preselector	99.95	
1045B Receiver preselector Dmfv	69.95	59 ⁹⁵
1045C Receiver preselector	69.95	64 ⁹⁵

ACCESSORIES

1305 5vdc 300ma adapter	\$ 12.95	
1312 12vdc 300ma adapter, 2.5mm plug	12.95	
1312B 12vdc 300ma adapter, 2.1mm plug	12.95	
1315 12vdc 500ma adapter	14.95	
30 Golden Classics book	9.95	
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32 Packet Made Easy book	9.95	
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107B 24-hour digital clock	9.95	
108B 24/12-hour dual disp digital clock	19.95	
112 Deluxe world map clock	24.95	
114 Large LED 24-hour clock	39.95	
202B RF noise bridge	59.95	
203 160-10m bandswitched dip meter	99.95	89 ⁹⁵
204B Antenna bridge	79.95	74 ⁹⁵
205 160-10m antenna resistance meter	89.95	84 ⁹⁵
206 Antenna current probe	79.95	69 ⁹⁵
207 160-10m SWR analyzer	79.95	74 ⁹⁵
208 2m SWR analyzer	79.95	74 ⁹⁵
209 1.8-170 MHz SWR analyzer	109.95	99 ⁹⁵
217 SWR analyzer, 30-50 MHz	79.95	69 ⁹⁵
218 SWR analyzer, 150-170 MHz	79.95	69 ⁹⁵
219 SWR analyzer, 440 MHz	99.95	89 ⁹⁵
219N SWR analyzer, 440 MHz w/type N	99.95	89 ⁹⁵
249 1.8-170 MHz SWR analyzer/LCD counter	199.95	179 ⁹⁵
68 249 to 259 upgrade kit	29.95	
259 1.8-170 MHz SWR analyzer/RF res meter	219.95	199 ⁹⁵
29 Padded carrying pouch; 209/249/259	19.95	
29B Pouch with window; 209/249/259	24.95	
66 1.8-30/30-170 MHz dip coils; 249/259	19.95	
280 Mobile compact speaker	19.95	
283 Speaker/mic, split jack; Alinco	24.95	
284 Speaker/mic; Icom/Yaesu/Alinco	24.95	
285 Mini spkr/mic; Icom/Yaesu/Alinco	24.95	
285L Mini spkr/mic L for Icom/Yaesu/Alinco	24.95	
285W Mini spkr/mic for Icom W2A	24.95	
286 Speaker mic; Kenwood	24.95	
287 Mini spkr/mic; Kenwood	24.95	
287L Mini spkr/mic L for Kenwood	24.95	
323 Keep-it-up battery maintainer	59.95	
346 600 MHz LCD frequency counter	189.95	169 ⁹⁵
411 Personal Morse Code Tutor	79.95	74 ⁹⁵
432 Voice Memory Keyer	99.95	94 ⁹⁵
462B RTTY/ASCII/CW/AMTOR Rcvr multi-reader	159.95	149 ⁹⁵
557 Deluxe code oscillator w/key	24.95	
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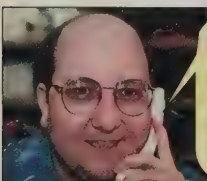
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MFJ - continued

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1202	Contest Connie voice keyer/interface	149.95	134 ⁹⁵
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1286	Gray Line DX Advantage prog; IBM	29.95	
1288	Picture passing packet soft; IBM	9.95	1 ⁹⁵
1292	Video digitizer for IBM	199.95	179 ⁹⁵
1610	Novice theory tutor software for IBM	29.95	
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1612	General theory tutor software for IBM	29.95	
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1614	Extra theory tutor software for IBM	29.95	
1615	No-code theory tutor software for IBM	49.95	
1621	40-10m 54" portable ant w/tuner	79.95	74 ⁹⁵
1630	Novice theory tutor software for Mac	29.95	
1631	Technician theory tutor software; Mac	29.95	
1632	General theory tutor software for Mac	29.95	
1633	Advanced theory tutor software; Mac	29.95	
1634	Extra theory tutor software for Mac	29.95	
1635	No-code theory tutor software for Mac	49.95	
1680I	Windows software package; Icom	109.95	99 ⁹⁵
1680K	Windows software package; Kenwood	109.95	99 ⁹⁵
1680Y	Windows software package; Yaesu	109.95	99 ⁹⁵
1681	Log Windows software	69.95	
1682	Packet Windows software	29.95	
1683I	Rig Windows software for Icom	29.95	
1683K	Rig Windows software for Kenwood	29.95	
1683Y	Rig Windows software for Yaesu	29.95	
5383I	Icom Xcvr interface cable	49.95	
5383K	Kenwood Xcvr interface cable	49.95	
5383Y/5383YB	Yaesu Xcvr interface cable	49.95	
1700B	Combination ant/xmtr switch	64.95	
1701	6-position coax switch	34.95	
1702B	2-position coax switch	21.95	
1702BN	2-pos 1.1 GHz type N switch	31.95	
1704	4-pos 500 MHz switch/lightning protect	59.95	
1704N	4-position type N switch	69.95	
1710	2m 3/4 wave telescopic antenna	9.95	
1712	2m/440 telescopic antenna	14.95	
1714	2m 1/2 wave telescopic antenna	16.95	
1716	2m/440 duck for HT	16.95	
1717	Gain 2m/440 duck for HT	19.95	
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1724B	2m/440 magnet mt antenna	14.95	
1728B	2m 3/4 wave mag mt ant/PL259/BNC	24.95	
1730	2m pocket roll-up vertical ant	14.95	
1740	2m 3/4 wave ground plane ant	12.95	
1750	2m 3/4 wave ground plane ant	19.95	
1752	220 3/4 wave ground plane ant	19.95	
1754	2m/440 ground plane antenna	24.95	
1763	2m 3el portable beam	39.95	
1764	2 & 6m dual 3/4 super gain base ant	34.95	
1765	Direct feed pwr splitter/harness ..Δmwf	29.95	19 ⁹⁵
1766	Stacked 2m dual 3/4 base antenna	89.95	84 ⁹⁵
1768	2m/440 beam antenna	49.95	
1778	G5RV 160-10m 102' ant (needs tuner)	29.95	
1780	14-30 MHz 150w 2' x 2' box loop ant	229.95	199 ⁹⁵
1782	Super Hi-Q 10-30MHz loop/basic control	269.95	239 ⁹⁵
1786	Super Hi-Q 10-30MHz loop/dlx control	299.95	269 ⁹⁵
1312B	12vdc 300ma adapter; 1782/1786	12.95	
1792	80/40m 33' vertical antenna	159.95	139 ⁹⁵
1793	80/40/20m vertical antenna	179.95	159 ⁹⁵
1796	40/20/15/10/6/2m 10' vertical ant	199.95	179 ⁹⁵



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1824BM	Cell look Motorola plug scanner ant	19.95	
1828B	Magnet mt BNC scanner antenna	29.95	
1828M	Mag mt Motorola plug scanner ant	29.95	
1864	Base scanner antenna w/preamp	79.95	69 ⁹⁵
2040	Repeater controller	449.95	249 ⁹⁵
3036	The Packet Radio Operators book	12.95	
3101	Fox Hunt Adventure book	7.95	
3210	Novice license guide	7.95	
3211	Tech Plus license guide	7.95	
3212	No code tech license guide	14.95	
3213	General license guide	7.95	
3214	Advanced license guide	7.95	
3215	Extra license guide	7.95	
3301	Troubleshooting Antenna & Feedlines book	12.95	
3302	7 Dipole and Long-Wire Antennas	12.95	
3303	73 Vertical, Beam, and Triangle Ants	12.95	
3304	Technician Antenna Handbook ...Dmwv	9.95	
3502	Solid State QRP Projects	12.95	
3504	FET Principles, Experiments & Projects	16.95	
5024	MFJ TNC - Ico/Yae/Al/RS HT cable	14.95	
5024X	PK-232 - Ico/Yae/Al/RS HT cable	14.95	
5024YV	KAM VHF/KPC3 - Ico/Yae/Al/RS HT cbl	14.95	
5024Z	PK-88 - Ico/Yae/Al/RS HT cable	14.95	
5026	MFJ TNC - Kenwood HT cable	14.95	
5026X	PK-232 - Kenwood HT cable	14.95	
5026YV	KAM VHF/KPC3 - Kenwood HT cable	14.95	
5026Z	PK-88 - Kenwood HT cable	14.95	
5080	MFJ TNC - Yaesu 8-pin cable	14.95	
5080M	MFJ TNC - Yaesu 8-pin modular	14.95	
5080MX	PK-232 - Yaesu 8-pin modular	14.95	
5080MYV	KAM VHF/KPC3 - Yaesu 8-pin mod	14.95	
5080MZ	PK-88 - Yaesu 8-pin modular	14.95	
5080X	PK-232 - Yaesu 8-pin cable	14.95	
5080YV	KAM VHF/KPC3 - Yaesu 8-pin cable	14.95	
5080Z	PK-88 - Yaesu 8-pin cable	14.95	
5082	Open end - 8-pin mic cable	9.95	
5084	MFJ TNC - Icom 8-pin cable	14.95	
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5084MX	PK-232 - Icom 8-pin modular	14.95	
5084MYV	KAM VHF/KPC3 - Icom 8-pin mod	14.95	
5084MZ	PK-88 - Icom 8-pin modular	14.95	
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5086	MFJ TNC - Kenwood/Alinco 8-pin cable	14.95	
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5086Z	PK-88 - Kenwood/Alinco 8-pin cable	14.95	
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5222	Open end - Alinco split HT cable	9.95	
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5226	Open end - Kenwood HT cable	9.95	
5268	Open end - modular phone plug cable	7.95	
5412	IBM printer cable	9.95	
5413	RS-232 cable DB-25M-252	9.95	
5414	RS-232 cable DB-25M-9F2	9.95	
5803/10	3' coax jumper cable	4.95	
8100K	Shortwave regenerative Rcvr kit	59.95	
8100W	Shortwave regenerative Rcvr wired	79.95	72 ⁹⁵
8400K	2m receiver kit	69.95	64 ⁹⁵
8400W	2m receiver wired	89.95	84 ⁹⁵
8621	VHF data radio w/145.01 MHz	119.95	109 ⁹⁵
4110	Portable AC power supply	39.95	
5100	Data radio cable - MFJ/TAPR	9.95	
5100X	Data radio cable - PK-232	14.95	
5100YV	Data radio cable - KAM/KPC-3	14.95	
5100Z	Data radio cable - PK-88	14.95	
9015	5w 15m CW Xcvr	179.95	154 ⁹⁵
9017	5w 17m CW Xcvr	179.95	149 ⁹⁵

MFJ - continued

9020	5w 20m CW Xcvr	179.95	154 ⁹⁵
9030	5w 30m CW Xcvr	179.95	154 ⁹⁵
9040	5w 40m CW Xcvr	179.95	154 ⁹⁵
27	Handle for CW station	4.95	
412	Plug-in Curtis keyer	39.95	
726	Plug-in audio filter	29.95	
971	200w portable ant tuner w/meter	89.95	84 ⁹⁵
1770	Portable 15m dipole	34.95	
1771	Portable 17m dipole	34.95	
1772	Portable 20m dipole	34.95	
1773	Portable 30m dipole	34.95	
1774	Portable 40m dipole	34.95	
4112	Portable power pack	49.95	
4114	Rechargeable power pack	69.95	64 ⁹⁵
9115B	9015 Xcvr/971 tuner/4114 ps/1770 ant ..	329.80	289 ⁹⁵
9117B	9017 Xcvr/971 tuner/4114 ps/1771 ant ..	329.80	289 ⁹⁵
9120B	9020 Xcvr/971 tuner/4114 ps/1772 ant ..	329.80	299 ⁹⁵
9130B	9030 Xcvr/971 tuner/4114 ps/1773 ant ..	329.80	299 ⁹⁵
9140B	9040 Xcvr/971 tuner/4114 ps/1774 ant ..	329.80	299 ⁹⁵
9420X	12w 20m SSB Xcvr w/mic	229.95	209 ⁹⁵
415	SSB Xcvr CW adaptor	39.95	
971	200w portable ant tuner w/meter	89.95	84 ⁹⁵
4110	Portable AC power supply	39.95	
4114	Rechargeable power pack	69.95	64 ⁹⁵

MIRAGE (MIR)

A-1015G	6m FM/SSB 10/150w amp/preamp	\$389.00	349 ⁹⁵
A-1035G*	6m FM/SSB 10/350w 28v amp/pre	653.00	589 ⁹⁵
B-23	2m FM/SSB 2/30w amplifier	129.00	119 ⁹⁵
B-23G	2m FM/SSB 2/30w amp/preamp	167.00	154 ⁹⁵
B-215G	2m FM/SSB 2/150w amp/preamp	377.00	339 ⁹⁵
B-108G	2m FM/SSB 10/80w amp/preamp	227.00	204 ⁹⁵
B-1016G	2m FM/SSB 10/160w amp/preamp	377.00	339 ⁹⁵
B-1030G	2m FM/SSB 10/300w amp/preamp	687.00	619 ⁹⁵
B-1060G*	2m FM/SSB 10/600w 28v amp/pre	1094.00	989 ⁹⁵
B-2516G	2m FM/SSB 25/160w amp/preamp	300.00	269 ⁹⁵
B-2530G	2m FM/SSB 25/300w amp/preamp	687.00	619 ⁹⁵
B-2560G*	2m FM/SSB 25/600w 28v amp/pre	1094.00	989 ⁹⁵
B-5016G	2m FM/SSB 50/160w amp/preamp	300.00	269 ⁹⁵
B-5030G	2m FM/SSB 50/300w amp/preamp	669.00	599 ⁹⁵
B-5060G*	2m FM/SSB 50/600w 28v amp/pre	1094.00	989 ⁹⁵

*Requires 28 volts; information on combining power supplies included in operations manual.

C-22	220 FM/SSB 2/20w amplifier	129.00	119 ⁹⁵
C-22G	220 FM/SSB 2/20w amp/preamp	167.00	154 ⁹⁵
C-211G	220 FM/SSB 2/110w amp/preamp	337.00	299 ⁹⁵
C-106G	220 FM/SSB 10/60w amp/preamp	238.00	214 ⁹⁵
C-1012G	220 FM/SSB 10/120w amp/preamp	337.00	299 ⁹⁵
C-1022G	220 FM/SSB 10/220w amp/preamp	653.00	589 ⁹⁵
C-2512G	220 FM/SSB 25/120w amp/preamp	315.00	289 ⁹⁵
C-2522G	220 FM/SSB 25/220w amp/preamp	653.00	589 ⁹⁵
C-5012G	220 FM/SSB 50/120w amp/preamp	334.00	299 ⁹⁵
C-5022G	220 FM/SSB 50/220w amp/preamp	637.00	569 ⁹⁵
D-15N	430 FM/SSB/ATV 2/18w type N amp	187.00	169 ⁹⁵
D-26N	440 FM/SSB 2/60w type N amplifier	267.00	244 ⁹⁵
D-1010N	440 FM/SSB 10/100w type N amp	391.00	354 ⁹⁵
D-3010N	440 FM/SSB 30/100w type N amp	361.00	329 ⁹⁵
D-100-ATVN	430 ATV 1/52w type N amp	414.00	369 ⁹⁵
D-1010-ATVN	430 ATV 10/100w type N amp	414.00	369 ⁹⁵
RC-1*	Remote control head w/18' cable	45.00	

*Not for B-23/C-22/D-26

The following Repeater Amplifiers are available on Special Order. Specify SO-239 or type N connectors

A-1015NR	6m FM 2/80w type N amplifier	\$596.00	539 ⁹⁵
A-1015R	6m FM 2/80w SO-239 amplifier	576.00	519 ⁹⁵
B-215NR	2m FM 1/110w type N amplifier	580.00	524 ⁹⁵
B-215R	2m FM 1/110w SO-239 amplifier	560.00	504 ⁹⁵
B-1016NR	2m FM 2/120w type N amplifier	621.00	559 ⁹⁵
B-1016R	2m FM 2/120w SO-239 amplifier	601.00	539 ⁹⁵
B-2516NR	2m FM 12/120w type N amplifier	570.00	519 ⁹⁵
B-2516R	2m FM 12/120w SO-239 amplifier	550.00	499 ⁹⁵
C-211NR	220 FM .5/80w type N amplifier	646.00	584 ⁹⁵
C-211R	220 FM .5/80w SO-239 amplifier	626.00	564 ⁹⁵
C-1012NR	220 FM 5/90w type N amplifier	646.00	584 ⁹⁵
C-1012R	220 FM 5/90w SO-239 amplifier	626.00	564 ⁹⁵
C-2512NR	220 FM 15/90w type N amplifier	615.00	559 ⁹⁵

MIRAGE - continued		Reg	Sale
C-2512R 220 FM 15/90w SO-239 amplifier ...	595.00	539 ⁹⁵	
D-1010NR 440 FM 4/80w type N amplifier	654.00	589 ⁹⁵	
D-3010NR 440 FM 12/80w type N amplifier ..	623.00	564 ⁹⁵	
D-100-ATVN-R 430 ATV 1/40w type N amp	654.00	589 ⁹⁵	
D-1010-ATVN-R 430 ATV 4/80w type N amp ..	654.00	589 ⁹⁵	
PREAMPS			
KP-1/10M 10m in shack preamp	\$136.00	124 ⁹⁵	
KP-1/6M 6m in shack preamp	136.00	124 ⁹⁵	
KP-1/2M 2m in shack preamp	136.00	124 ⁹⁵	
KP-1/220 220 in shack preamp	136.00	124 ⁹⁵	
KP-1/440 440 in shack preamp	136.00	124 ⁹⁵	
KP-2/10M 10m mast mount preamp	191.00	174 ⁹⁵	
KP-2/6M 6m mast mount preamp	191.00	174 ⁹⁵	
KP-2/2M 2m mast mount preamp	191.00	174 ⁹⁵	
KP-2/220 220 mast mount preamp	191.00	174 ⁹⁵	
KP-2/440 440 mast mount preamp	191.00	174 ⁹⁵	

WATTMETERS			
MP-1 160-10m 25/200/2kw PEP wattmeter ..	\$232.00	209 ⁹⁵	
MP-2 6 & 2m 50/500/1.5kw PEP wattmeter ..	232.00	209 ⁹⁵	
MP-3 420-450 5/50/500w PEP wattmeter	264.00	239 ⁹⁵	
MP-4 1.2 GHz 1/10/100w PEP wattmeter	280.00	259 ⁹⁵	

MOTOROLA (MOT)			
Belt clip kit for HTs	Δm	\$ 19.95	14 ⁹⁵

NCG (NCG)			
MH-900P Earpiece/bm mic/PTT; all HT but Ken	\$ 39.95		
MH-900PK Earpiece/boom mic/PTT; Ken HT ...	39.95		
MP-28 Boom mic/headset/PTT; all HT but Ken	39.95		
MP-28K Boom mic/headset/PTT for Ken HT ...	39.95		
Power Pocket 12v 2AH lead acid belt batt/cgr	66.95		

NAVAL (NAV)			
HTS-3 5-15vdc amplified speaker	\$ 34.95		
MK-303 Earphone/PTT/mic for Icom HT's	14.95		

NEW WAVE (NEW)			
Adventurer 12' extended Portable alum mast m	\$ 99.95		
Traveler 19' extended Portable alum mast ..m	124.95		
Rover 26' extended Portable alum mast	149.95		
Expeditioner 33' extended Portable alum mast m	174.95		
Explorer 40' extended Portable alum mast m	199.95		
Big Foot Welded, unpainted park-on mt ..m	119.95		

NICAD BATTERIES			
GE NICADS (GEX)			
2GE3A AAA size nicad	Δm, pair	\$ 6.81	1 ⁹⁵
BC-8B/Charge 8 Charger for 8 nicads	Δm	21.99	9 ⁹⁵
JBRO NICADS (JAB)			
J/BP-4 Battery; Yaesu FNB-2/A	Δv	\$ 24.95	19 ⁹⁵
J/CM-2 Replacement inserts; Ico BP-2	Δmf	24.25	19 ⁹⁵
J/CM-5 Replacement inserts; Ico BP-5	Δfv	30.50	24 ⁹⁵
J/CM-7F 13.2v 450ma batt for Icom	Δmv	72.70	39 ⁹⁵
J/CM-8F 8.4v 850ma batt for Icom	Δmf	70.00	44 ⁹⁵

NORCOMM (NOR)			
NC-401 Sub-miniature DTMF decoder	m	\$ 59.95	

NYE VIKING (NYE)			
ANTENNA TUNERS AND ACCESSORIES			
MBIV-A1 3kw tuner without balun	Δwfv	\$702.00	479 ⁹⁵
MBV-A 3kw tuner with ant switch & meters ..		830.00	729 ⁹⁵
MBV-B As MBV-A, without meters		689.00	599 ⁹⁵
020-001 2kw low-pass filter		49.00	

PHONE PATCHES			
047-001 Phone patch w/4-pin, no spkr Δmf	v	\$157.50	99 ⁹⁵
047-002 Phone patch w/8-pin, no spkr		175.50	159 ⁹⁵
047-003 Phone patch w/8-pin & spkr		187.50	169 ⁹⁵

SQUEEZE PADDLE			
SSK-001 Dual paddle Super Squeeze Key		\$ 56.00	

MASTER KEY			
330-001 Black enamel base w/cable, plug ...		\$ 65.00	
HEAVY DUTY SPEED-X KEYS WITH NAVY KNOBS			
320-001 No shorting switch		\$ 31.00	
320-003 As above, w/shorting switch		36.00	
322-001 Brass hardware, no switch		31.00	
322-003 As above, w/shorting switch		36.00	

NYE - continued		Reg	Sale
STANDARD SPEED-X KEYS			
310-001 Black, no shorting switch		\$ 28.40	
310-003 As above, w/shorting switch		33.50	
312-001 Brass arm, no shorting switch		28.60	
312-003 As above, w/shorting switch		33.50	
315-001 Polished brass oval key, steel base .		57.00	
315-003 As above, w/shorting switch		63.95	

KEY ACCESSORIES			
013-001 Navy knob		\$ 15.50	
300-001 Black plastic base for keys	Df	8.00	1 ⁹⁵
300-002 Hvy steel base, no-skid feet for keys .		17.00	

CODE PRACTICE SETS (BUZZER)			
404-001 Code practice set, no key	Δmwfv	\$ 24.50	9 ⁹⁵
404-002 Code practice set w/hand key	Δmf	51.87	29 ⁹⁵
Oak Bay Technologies (OAK)			
AM-101B BNC duck window mount		\$ 24.95	
CA-232HH Handheld packet cable		34.95	
CA-232U Universal packet cable		34.95	
LP-11P 1.8-30 MHz 1kw low-pass filter		69.95	
LP-50 1.8-54 MHz 1kw low-pass filter		69.95	
PS-101 Heavy duty DC power strip		79.95	

Optoelectronics (OPT)			
3300 Mini 10-digit frequency counter		\$139.00	
8040 Multifunction 10-digit counter/timer		679.00	
R-10 30-2000MHz FM communications interceptor		359.00	
Scout/400/Scout 40 10-2800MHz freq rec/ctr		449.00	
SSB-220A SSB/gen purpose bench freq ctr ...		399.00	

OUTBACKER (OUT)			
OB-8 300w PEP 6' 75-10m 8-band mobile ant ..		\$259.00	
OB-8HP 500w PEP 6' 75-10m 8-band mob ant .		289.00	
OB-S8 8-band mobile ant w/storage bag		289.00	
OB-8TRI 3-pc 300w PEP 6' 8-band port ant ..		319.00	
OB-JR8 150w PEP 4' 75-10m 8-band mob ant .		229.00	
Perth 7.5' 75/40/30/20/17/12/10m mobile ant		274.00	
OB-M 300w PEP 6' 75/40/20/17/10m/HF marine .		389.00	
OB-SB ¾-24 spring and ½" hole base		82.00	
Diamond K-400K-3/8M ¾-24 trunk mt, coax ..		78.95	

Palomar Engineers (PAL)			
FER-2 RF ferrite toroid kit		\$ 18.00	
LA-1 Loop amplifier; matches loop to Rcvr ...		99.95	
5-15 MHz plug-in loop (HF-1)		89.95	
1.6-5 MHz plug-in loop (160m, 80m)		89.95	
.55-1.6 MHz plug-in loop (AM broadcast)		89.95	
150-550 KHz plug-in loop (LF, 1750m)		89.95	
40-150 KHz plug-in loop (WWVB, Loran)		89.95	
10-40 KHz plug-in loop (Omega)	Δmwfv	89.95	69 ⁹⁵
M-835 Bar graph HF auto SWR/pwr meter ..	Dv	199.95	159 ⁹⁵
M-840 Bar graph HF auto SWR/power meter ..		199.95	189 ⁹⁵
PS-95 AC adapter for M-835/840		15.00	
MLB-1 Magnetic longwire receiving balun		39.95	
P-405 1.8-54MHz 20db 9v Rcv preamp Δmwfv		149.95	99 ⁹⁵
P-408 1.8-54MHz 20db AC Rcv preamp	Δmwv	159.95	119 ⁹⁵
P-410X 160-6m 20 db Xcvr preamp		179.95	169 ⁹⁵
P-412X 160-6m 20 db mobile Xcvr preamp ..		179.95	169 ⁹⁵
PF-300 SC audio filter	†	159.95	129 ⁹⁵
PK-200 Jones dual-paddle key		170.00	159 ⁹⁵
PT-340 Tuner-Tuner (use with ant tuner)		99.95	
RX-100 1-100 MHz RX noise bridge		79.95	
SMB-5 SmartBridge prog for AT computers		29.95	
SB-A 2kw 1.7-30 MHz 4:1 balun w/SO-239 ...		79.95	
VLF-A VLF converter; 10-500 KHz to 80m		79.95	
VLF-S VLF conv; 10-500 KHz to 4-4.5 MHz		79.95	

PANASONIC (PAN)			
RF-B45 Compact FM/LW/MW/SW port Rcvr ...		\$199.95	169 ⁹⁵
RF-B65 FM/LW/MW/SW port Rcvr	Dfv	279.95	179 ⁹⁵
PENETROX (PEN)			
Penetrox A 4 oz tube for antennas		\$ 7.20	
PERCON (PEC)			
Spectrum FCC database CDROM		\$ 29.95	
PERIPHEx (PER)			
BP-7S 13.2v 1200ma battery for Icom		\$ 65.00	
BP-8 8.4v 1400ma battery for Icom	†	75.00	40 ⁹⁵

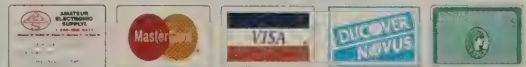
PERIPHEx - continued		Reg	Sale
BP-8S 9.6v 1200ma battery for Icom		65.00	
BP-83S 7.2v 800ma battery for Icom		43.50	
BP-84S 7.2v 1400ma battery for Icom		63.00	
BP-85S 12v 800ma battery for Icom		76.00	
BP-114S 12v 800ma battery for Icom		79.00	
BP-132 12v 600ma battery for Icom		54.00	
BP-132A 12v 600ma battery for Icom		54.00	
SAT Internal 7.2v 300ma int batt; IC-2SAT ...		25.00	
BP-3 Insert 8.4v 270ma insert; Icom BP-3 ...		18.95	
BP-5 Insert 10.8v 500ma insert; Ico BP5 Dmwfv		24.95	
BP-7 Insert 13.2v 500ma insert; Ico BP7 Dfv		29.50	
BP-8 Insert 8.4v 800ma insert; Icom BP-8 ...		29.50	
CNB-152 12v 600ma battery for Standard ..†		58.50	44 ⁹⁵
EBP-22S 12v 800ma battery for Alinco		65.00	
EBP-24S 7.2v 1500ma battery for Alinco		62.00	
FNB-2 10.8v 500 ma battery for Yaesu ..Dmw		22.50	
FNB-11 12v 800ma battery for Yaesu	†	58.50	40 ⁹⁵
FNB-12 12v 600ma battery for Yaesu		54.50	
FNB-14S 7.2v 1400ma battery for Yaesu		59.75	
FNB-26 7.2v 1000ma battery for Yaesu		60.00	
FNB-26S 7.2v 1400ma battery for Yaesu†		65.00	48 ⁹⁵
FNB-27 12v 600ma battery for Yaesu		60.00	
FNB-27S 12v 800ma battery for Yaesu		65.00	
FNB-33 4.8v 1200ma battery for Yaesu		53.25	
FNB-38 9.6v 600ma battery for Yaesu		66.90	
PB-1 1200ma battery for Kenwood .....Dmwv		67.00	59 ⁹⁵
PB-7S 7.2v 1400ma battery for Kenwood		59.00	
PB-8S 12v 800ma battery for Kenwood	†	59.00	47 ⁹⁵
PB-13S 7.2v 1200ma battery for Kenwood		49.75	
PB-14S 12v 400ma battery for Kenwood		60.00	
PB-17 12v 800ma battery for Kenwood		49.95	
PB-18 7.2v 1100ma battery for Kenwood		49.25	
PB-25S/26S 8.4v 800ma battery; Kenwood ...		65.00	
PB-33 6v 1200ma battery for Kenwood		49.00	
PB-34 9.6v 600ma battery for Kenwood		54.00	
Santec ST-142 9.6v 600ma battery; ST-142 ..		23.95	

PHILIPS (PHI)			
U-105 Light duty rotor		\$ 99.90	69 ⁹⁵
TB-105 Thrust bearing		18.25	

PICQUIC (PIC)			
88101 Full size 6-in-1 screwdriver set ...Δmv		\$ 16.95	6 ⁹⁵
91102 Stubby 6-in-1 screwdriver set ...Δmf		12.95	4 ⁹⁵

PIPO TOUCH-TONE PADS (PIP)			
PK-1 12-digit pad	m	\$ 71.00	
PK-1K 12-digit pad w/delay relay	m	78.00	
PK-1M 12-digit pad for surface mtg	m	71.00	
PK-2 16-digit pad	m	76.00	
PK-2K 16-digit pad w/delay relay	m	83.00	
PK-2M 16-digit pad for surface mtg	m	76.00	
PK-3-12 12-dig pad w/separate electronics Δm		58.00	29 ⁹⁵
PP-5V 12-digit vertical pad w/light	Δm	69.00	39 ⁹⁵
P-7V 12-digit vertical rugged mini pad	m	58.00	

POLYPHASER (PLY)			
LIGHTNING PROTECTION			
IS-50NX-C2 125-1000 375/125/50w N flange		\$ 52.95	
IS-50UX-C0 1.5-400 2kw/375/125w flange mt		52.95	
IS-50UX-C1 50-700MHz 375/125w flange mt .		52.95	
IS-B50LN-C2 125-1000 375/125/50w N bulkhead		59.95	



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- Coupons, etc.

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POLYPHASE - continued

IS-B50LU-C0 1.5-400 2kw/375/125w bulkhead	59.95
IS-B50LU-C1 50-700MHz 375/125w bulkhead mt	59.95
IS-PLD0-120-15A 120v 15A power protector	143.95
IS-PLD0-120-20A 120v 20A power protector	179.95
IS-RCT 8-wire rotor control protector	46.95
IS-SPTL Single phone line protector	57.95
1.5" STRAP 1 1/2" copper strap .....per linear ft.	.95
3" STRAP 3" copper strap .....per linear ft.	2.75
6" STRAP 6" copper strap .....per linear ft.	3.95
AL-SPGP Alum single point ground panel	52.95
CU-SPGP Copper single point ground panel	52.95
GLEP Lightning and EMP Protection book	22.95

PRO AM by VALOR

VHF/UHF ANTENNAS ONLY (No Mounts)

MO144-440 2m/440 antenna	\$ 21.90	19 ⁹⁵
PAQA 136-515 MHz 1/2 wave antenna	8.00	
PAQ-144 2m 1/4 wave antenna	8.00	
PAQ-435 440 1/4 wave antenna	8.00	
PAQ-3820 2m 1/4 wave whip w/1/4-24 thread	8.00	
PHB-144 2m 3/8 wave 3 db antenna	31.80	24 ⁹⁵
PHB-220 220 3/8 wave 3 db antenna	31.80	12 ⁹⁵
PUB-440 440 5 db antenna	39.80	29 ⁹⁵

MOUNTS ONLY FOR ABOVE ANTENNAS

PAM Low profile magnet mount w/coax	\$ 28.40	24 ⁹⁵
PAS 3/8" surface mount w/coax	20.00	16 ⁹⁵
PASMO 3/8" surface mt only (no coax)	7.90	
PAS38 3/8" surface mount w/coax	20.00	14 ⁹⁵
PAS38MO 3/8" surface mt only (no coax)	7.90	
PAT-2 No hole trunk mount w/coax	27.90	22 ⁹⁵
PAT-3 Swivel NMO-style trunk mt w/coax	35.80	29 ⁹⁵

OTHER VHF/UHF ANTENNAS & MOUNTS

77BNC 2m/440 12" 0/2.1db BNC rubber duck	\$ 23.90	19 ⁹⁵
144BNC 2m 12" 1/4 wave rubber duck w/BNC	11.00	9 ⁹⁵
220BNC 220 10" 1/4 wave rubber duck w/BNC	11.00	9 ⁹⁵
450BNC 440 6 1/2" 1/4 wv rubber duck w/BNC	11.00	9 ⁹⁵
BNC-SC Suction cup extension; rubber ducks	14.70	9 ⁹⁵
WMSL-BNC Window clip for rubber ducks	42.80	29 ⁹⁵
82BNC Magnet mt for BNC w/coax	27.00	22 ⁹⁵
101ADN HD alum mirror mt w/SO-239	7.20	
116N Gutter mt for 3/4-24 up to 48"	9.40	2 ⁹⁵
301 3/4-24 magnet mt only w/coax	22.40	19 ⁹⁵
401 Low profile 3/4-24 mag mt only w/coax	27.80	24 ⁹⁵
DAK Mt for 2 vert ants or horizontal dipole	13.80	
GM-100AD SS GM 3/4-24 mirror mt w/SO-239	10.60	
GM-100ADT Alum GM 3/4-24 mirror mt w/SO-239	10.60	6 ⁹⁵
GM-270 2m/440 2.6/6.3db on glass antenna	59.95	39 ⁹⁵
MM-3401 Maxi-mag mt 3/4-24 kit (3-5" mags)	59.90	49 ⁹⁵
SS-100MOT 3-way NMO mirror mt w/coax	23.80	19 ⁹⁵
CX-144 2m 3/8 wave 3 db 3/4-24 whip	17.90	14 ⁹⁵
CX-220 220 3/8 wave 3 db 3/4-24 whip	17.90	7 ⁹⁵
MM-270B 2m/440 mini mag mt ant w/BNC	56.60	39 ⁹⁵
PAQM 144-450 MHz 1/4 wave BNC mag ant	28.80	24 ⁹⁵
PM-144-440BN 2m/440 BNC mag mt ant	33.90	29 ⁹⁵
TGS 30-1200MHz on-glass scanner ant	51.90	39 ⁹⁵
VAA-002 144-450 MHz 1/4 wave mag mt ant	23.80	19 ⁹⁵
VAA-002BN 144-450 MHz 1/4 wv BNC mag ant	27.80	22 ⁹⁵
120 Sawtooth hump mt for mobile radios	5.60	
D-270 2m/440 100w duplexer	45.90	39 ⁹⁵
DB-240 2m/440 base station antenna	105.20	69 ⁹⁵

MOBILE HF ANTENNAS (No Mounts)

AB-5 75/40/20/15/10m antenna	\$119.60	89 ⁹⁵
PHF-160 160m 8' 3/4-24 whip	97.80	69 ⁹⁵
PHF-75 75m 8' 3/4-24 whip (4' coil, 4' whip)	29.80	24 ⁹⁵
PHF-40 40m 8' 3/4-24 whip (4' coil, 4' whip)	23.80	19 ⁹⁵
PHF-20 20m 8' 3/4-24 whip (4' coil, 4' whip)	23.80	19 ⁹⁵
PHF-15 15m 8' 3/4-24 whip (4' coil, 4' whip)	23.80	19 ⁹⁵
PHF-10 10m 8' 3/4-24 whip (4' coil, 4' whip)	23.80	19 ⁹⁵

QSL Card Holders (ART)

QSL Card Holders, pack of 3, 20 cards/holder \$ 9.95

RF APPLICATIONS (RFA)

P-3000 1.8-30MHz dig power/SWR indicator	\$299.00
P-3000-P Power supply	12.95

RF CONCEPTS (RFC)

144 2m FM mini-amp 2/30w amplifier	\$109.95	99 ⁹⁵
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Reg Sale

RF CONCEPTS - continued

144P 2m FM mini-amp 2/30w amp/preamp	129.95	119 ⁹⁵
VHF1-60 2m 1/60w HT amplifier	249.95	229 ⁹⁵
2-23 2m FM/SSB 2/30w amp/preamp	149.95	139 ⁹⁵
2-315 2m FM/SSB 30/150w amp/preamp	319.95	289 ⁹⁵
2-417 2m FM/SSB 45/170w amp/preamp	319.95	289 ⁹⁵
2/70 2m/440 FM 3/30/5/20w HT amp	259.95	239 ⁹⁵
2/70G 2m/440 FM 3/30/5/20w HT amp/preamp	289.95	259 ⁹⁵
2/70H 2m/440 20/200/20/100w N amp	799.95	719 ⁹⁵
3-22 220 FM/SSB 2/20w amp/preamp	149.95	139 ⁹⁵
3-211 220 FM/SSB 2/110w amp/preamp	349.95	319 ⁹⁵
3-112 220 FM/SSB 10/120w amp/preamp	349.95	319 ⁹⁵
3-312 220 FM/SSB 30/120w amp/preamp	339.95	299 ⁹⁵
440 440 FM mini-amp 3/20w amplifier	119.95	109 ⁹⁵
440P 440 FM mini-amp 3/20w amp/preamp	139.95	129 ⁹⁵
UHF-50 440 3/50w HT type N amplifier	299.95	269 ⁹⁵
4-32 440 FM/SSB 3/20w amp/preamp	159.95	149 ⁹⁵
4-110 440 FM/SSB 10/100w N amp/preamp	389.95	359 ⁹⁵
4-310 440 FM/SSB 30/100w N amp/preamp	359.95	329 ⁹⁵

RF LIMITED (RFL)

HL-35V 2m .5-5/20-35w Power Plus amp/preamp	\$119.95	99 ⁹⁵
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RF PARTS (See Diamond)

RF PRODUCTS (RFP)

196-214 2m 1/4 wv BNC telescopic whipΔwf	\$ 8.95	6 ⁹⁵
199-416 BNC mag mt, 10' coax w/BNC		17.95	
199-495 SO239 mag mt, 13' coax/PL259	.....Δmwf	23.95	12 ⁹⁵

RACOM (RCO)

700 Automatic morse code identifier	.....m	\$ 92.00
700-PC Programming kit	.....m	30.00

Radio Amateur Callbook (RAC)

087166 1995 North American Callbook		\$ 35.00
087204 1995 International Callbook		35.00
01526X 1995 World Radio TV Handbook		24.95

RADIO PUBLICATIONS

087034 All About Cubical Quad Antennas	.....	\$ 11.95
087042 Beam Antenna Handbook		11.95
087050 All About VHF Amateur Radio		11.95
087069 Radio Amateur Antenna Handbook		11.95
087077 Simple, Low Cost Wire Antennas		11.95
087093 Interference Handbook		11.95
087107 All About Vertical Antennas		11.95

GORDON WEST RADIO SCHOOL

087336/GW0010 2-Week Tech Theory	.....Δmf	\$ 34.95	14 ⁹⁵
087360/GW0007 Complete Gen Course	.....Δwf	69.95	39 ⁹⁵
087379/GW0015 Advanced Theory	.....Δmf	44.95	24 ⁹⁵
087395/GW0017 Extra Code Course	.....Δm	44.95	34 ⁹⁵
GW0012 Tech/General Theory Course	.....Δm	34.95	12 ⁹⁵
RC0055 N6RJ Elec 2nd Op, 5 1/2" IBM	.....Δmv	59.95	9 ⁹⁵
087263 Novice Voice Class		5.95	
087417/GW0990 FCC Rules and Regulations		3.50	

RANGER (RAN)

RCI-2950 25w FM/SSB 10m Xcvr		\$499.00	259 ⁹⁵
RCI-2970 100w FM/SSB 10m Xcvr		699.00	369 ⁹⁵

Revere Industries (REV)

RCS-1 Mobile mini speakerΔm	\$ 12.95	6 ⁹⁵
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ROHN TOWERS (ROH)

HBX-40/BXB-6 40' tower, 10 sq ft, 228 lbs *T	\$469.90	399 ⁹⁵
HBX-48/BXB-7 48' tower, 10 sq ft, 303 lbs *T	628.60	499 ⁹⁵
HBX-56/BXB-8 56' tower, 10 sq ft, 385 lbs *T	789.00	629 ⁹⁵
HDBX-40/BXB-7 40' tower, 18 sq ft, 281 lbs *T	584.60	469 ⁹⁵
HDBX-48/BXB-8 48' tower, 18 sq ft, 363 lbs *T	775.00	619 ⁹⁵

*Drop-shipped from factory or limited stock in Milwaukee for pick-up
On factory drop-shippings we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB the Rohn factory, which has various locations, via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these drop-shipped towers. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

Note: Rohn states that "antennas developing a large twisting moment due to wind must not be used on HDBX/HDBX-series towers. Antennas should be limited to those having a maximum boom length of 10 ft.

SGC (SGC)

04-01 SG-2000 150w 1.8-30 MHz 12v Xcvr	1995.00	147 ⁹⁵
04-02 .5-30 MHz 12v Rcvr (special order)	1700.00	152 ⁹⁵
04-03 150w 1.8-30MHz 12v Xmtr (spec order)	1700.00	152 ⁹⁵
04-11 Remote head w/yoke mount & cable	695.00	629 ⁹⁵
04-12 Remote kit w/swivel bkt & cable	200.00	179 ⁹⁵
04-13 Remote kit w/5-way mount & cable	350.00	319 ⁹⁵
04-14 Rem kit w/suction cup mt & cable	495.00	449 ⁹⁵
51-81 Fan kit for continuous duty xmit	300.00	269 ⁹⁵
52-31 Waterproof military handset	375.00	339 ⁹⁵
52-32 Telephone handset	190.00	174 ⁹⁵
52-34 RS-232 interface; SG-2000 Xcvr .fm	195.00	159 ⁹⁵
52-46 Mounting tray	50.00	
52-47 Shock/military mounting tray	300.00	269 ⁹⁵
52-51 CA-1 High voltage feed wire .per ft.	70¢	
52-52 CA-2 RG-58 coax cable .....per ft.	90¢	
52-53 CA-230 Ant coupler cable .....per ft.	4.00	
52-54 CA-2000 Remote head cable .per ft.	4.00	
52-56 CA-4 RG-8A/U coax cable .....per ft.	1.10	
53-03 PS-35/AC 30A/45A peak HD ps	700.00	629 ⁹⁵
52-61 PSC/12-1 12' ps cable, 1 plug	50.00	
52-62 PSC/12-2 12' ps cable, 2 plugs	60.00	
52-63 PSC/25-1 25' ps cable, 1 plug	60.00	
52-64 PSC/25-2 25' ps cable, 2 plugs	70.00	
53-53 PS fan kit for continuous xmit	300.00	269 ⁹⁵
52-96 SG-500 1.8-24MHz 12v 500w PEP amp	995.00	949 ⁹⁵
54-12 SG-230 150w 1.8-30 MHz 12v auto tuner	595.00	489 ⁹⁵
54-61 25' extension cable	60.00	
54-62 50' extension cable	90.00	
54-63 SmartLock; tuners made after 9/1/93	59.95	
55-04 SG-103 1.8-30MHz broadband 150w dip .fm	450.00	169 ⁹⁵
55-06 SG-104 2-28 MHz 90' 1kw dipole	700.00	629 ⁹⁵
55-27 SG-303 1.8-30' mobile whip & mt	495.00	449 ⁹⁵
55-67 Replacement whip for SG-303	150.00	139 ⁹⁵
55-41 SG-104 2-28MHz 90' 1kw dipole w/coax	750.00	679 ⁹⁵
55-45 QMS Quick universal mount system	490.00	449 ⁹⁵
55-46 QMS-1 Quick mt system w/SG-230	1085.00	
55-47 QMS-2 Quick mt sys w/SG-230/303 .fmv	1580.00	895 ⁰⁰
55-91 60' RG-58/U coax w/PL-259s	50.00	
55-92 120' RG-58/U coax w/PL-259s	70.00	
55-93 60' RG-8 coax w/PL-259s	80.00	
55-94 120' RG-8 coax w/PL-259s	120.00	
55-95 150' total extension; SG-103/104	70.00	
56-15 External ARQ/FEC system	1200.00	106 ⁹⁵
90-30 SG-2000-RS Spares kit for SG-2000	789.00	709 ⁹⁵
90-31 SG-2000-DS Depot spares kit; SG-2000	1512.00	1349 ⁹⁵
90-32 SG-2000-CS Dlx spares kit; SG-2000	3953.00	3549 ⁹⁵

Call for quote on SGC commercial ALE system

SAMS Books (SAM)

Active Filter Cookbook	.....Δm	\$ 24.95	9 ⁹⁵
CMOS Cookbook	.....Δm	24.95	9 ⁹⁵
IC OP-AMP Cookbook	.....Δm	24.95	9 ⁹⁵
IC Timer Cookbook	.....Δm	24.95	9 ⁹⁵

SANGEAN (SAN)

ATS-202 AM/FM/SW portable receiver	\$159.00	89 ⁹⁵
ATS-803A AM/FM/shortwave port Rcvr ..Δmf	249.00	169 ⁹⁵
ATS-808 AM/FM/shortwave port Rcvr ..Δmf	259.00	159 ⁹⁵
ATS-818 AM/FM/shortwave portable Rcvr	299.00	179 ⁹⁵
ATS-818CS AM/FM/SW port Rcvr w/cassette	359.00	229 ⁹⁵
DT-200V AM/FM/VHF TV sound dig port Rcvr	79.95	69 ⁹⁵
SG-796 AM/FM/shortwave portable Rcvr ..Δm	59.95	39 ⁹⁵

SEQUOIA (SEQ)

POCKET PC REF Pocket PC reference book	\$ 14.95
POCKET REF Pocket reference book	9.95

SHAKESPEARE (SHA)


376-GB 10m 18' tunable fg base ant (UPS) Δmf	\$ 94.25	49 ⁹⁵
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SHURE (SHU)

444D High/low-Z desk microphone	\$ 95.00	82 ⁹⁵
R111 Replacement cartridge	29.20	
526T Series II Dynamic amplified desk mic	129.00	112 ⁹⁵
R96 Replacement cartridge	26.20	
404C High-Z deluxe mobile microphone	61.75	56 ⁹⁵
R5F Replacement cartridge	29.00	

AES® GIFT CERTIFICATES...
Information on p. 23

Reg Sale		SONY - continued		Reg Sale		STANDARD - continued		Reg Sale	
SMILEY ANTENNA (SMI)		WMFX507 Super Walkman! Dig/auto rev/Dolby		179.99	139 ⁹⁵	CNB-153 7.2v 1000ma nicad battery		99.00	
270A 2m/440 gain telescopic whip		SPORTS WALKMAN				CNB-171 7.2v 700ma nicad battery		79.00	
5/8 SLD-2 2m ½ Slim Duck rubber ant		SRF85 AM/FM only		\$ 49.99	34 ⁹⁵	CNB-172 12v 600ma nicad battery		120.00	109 ⁹⁵
5/8 SLD-220 220 ½ Slim Duck rubber ant		SRFM70 Digital tuner w/10 presets		64.99	49 ⁹⁵	CNB-173 7.2v 1100ma nicad battery		99.00	94 ⁹⁵
5/8 SLD-440 440 ½ Slim Duck rubber ant		WMFS395 Top of the line! Dig/Dolby/water res		99.99	89 ⁹⁵	CSA-181A Desk rapid charger		124.00	119 ⁹⁵
5/8 SLD-2 Combo 2m ½ duck & stubby ant ...		PORTABLES				CTN-520 Enc/decode; early 228/528A ....Δf		92.00	59 ⁹⁵
5/8 SLD-220 Combo 220 ½ duck & stubby ant .		CFD8 AM/FM, CD, cassette		\$129.99	99 ⁹⁵	C-168A Dlx sub-mini 2m FM HT/batt/cgr/TTP ..		469.00	CALL
5/8 SLD-440 Combo 440 ½ duck & stubby ant .		CFD610 Dig w/remote/6 disc CD changer/hi pwr		349.99	269 ⁹⁵	FREE CMP-115 from Standard - C-168A thru 8/31/95			
FLX 1/2 WAV-2M ½ wv 2m BNC whip/flex coil		CFD768 1 bit CD, dig, autoreverse, rem, 20w .		389.99	299 ⁹⁵	C-468A Dlx sub-mini 440 FM HT/batt/cgr/TTP ..		480.00	CALL
RD-2 2m rubber duck antenna		MICRO CASSETTES				FREE CMP-115 from Standard - C-468A thru 8/31/95			
RD-220 220 rubber duck antenna		M425 Pressman micro recorder		\$ 32.99	27 ⁹⁵	CAX-03 Bottom cover		12.00	
RDMD-2 2m mini rubber duck antenna		M727V VOR w/tape counter		69.99	56 ⁹⁵	CAX-160 Remote battery adapter .....Δmwf		50.00	29 ⁹⁵
RDMD-220 220 mini rubber duck antenna		ANSWERING MACHINES				CBT-160 Battery case		20.00	
RDMD-440 440 mini rubber duck antenna		TAM50 Voice time & date stamp, rem call bk		\$129.99	69 ⁹⁵	CHP-111 Headset mic w/PTT switch		45.00	
RDS-2 2m stubby rubber duck antenna		ITA3000 Integrated phone/dig ans machine ..		299.99	219 ⁹⁵	CHP-150 Headset mic w/VOX		81.00	
RDS-220 220 stubby rubber duck antenna		FEATURE PHONES				CLC-160 Mini carrying case		26.00	
RDS-440 440 stubby rubber duck antenna		ITD10 Scratch pad memory		\$ 69.99	49 ⁹⁵	CLC-161 Mini carrying case		26.00	
SD-2 2m Slim Duck thin rubber antenna		ITD20 2-line, distinctive ring for each line ...		99.99	79 ⁹⁵	CLC-162 Mini carrying case		27.00	
SD-220 220 Slim Duck thin rubber antenna ..		CORDLESS PHONES				CMP-111 Speaker/mic		54.00	
SL-440 440 slimline type duck		SPP160 10 ch, spkr phone, 2-way intercom ..		\$249.99	149 ⁹⁵	CMP-113 Tie-pin spkr/mic		44.00	
SS-II Super Stick 2m ½ wv telescopic ant		SPPD15 2 line, 10 number memory		269.99	179 ⁹⁵	CMP-115 Mini speaker/mic		50.00	
SS-III Super Stick 220 ½ wv telescopic ant ...		SPPX90 10 ch, top of the line, 2 phones in 1 .		349.99	259 ⁹⁵	CMP-123 Ear phone spkr/mic		57.00	
SS-IV Super Stick 440 ½ wv telescopic ant		SOUTH RIVER (UPS OK) (SOU)				CMU-160 40 ch mem; 168A/558A .....Δwfv		31.00	19 ⁹⁵
SS-II/Combo 2m ½ wv telescopic & stubby ant .		HDT-3E-PPK 3' boxed tripod		\$ 19.95		CMU-161 200 channel memory		44.00	
SS-III/Combo 220 ½ wv telescopic & stubby ant .		HDT-5E-PPK 5' boxed tripod		29.95		CNB-160 Mini 6v 300ma nicad batt .....Δmfv		72.00	49 ⁹⁵
SS-IV/Combo 440 ½ wv telescopic & stubby ant .		STANDARD (STA)				CNB-161 Mini 7.2v 700ma nicad battery ...		75.00	
TAQ-2 2m ¼ wave stainless whip		C-158A Dlx mini 2m FM HT/batt/cgr/TTP Dmwf		\$339.00	239 ⁹⁵	CNB-162 Mini 12v 600ma nicad battery		125.00	109 ⁹⁵
TAQ-220 220 ¼ wave stainless whip		\$30 coupon - C-158A until gone! OR				CNB-163 Mini 7.2v 1000ma nicad batt		99.00	94 ⁹⁵
TAQ-440 440 ¼ wave stainless whip		FREE CMP-115 from Standard - C-158A until gone!				CSA-181A Desk rapid charger		124.00	119 ⁹⁵
TS Thin Stick 2m/220 ½ wave telescopic whip .		C-178A 2m/440 FM HT/batt/cgr/TTP/CTCSS ..		459.00	CALL	C-188A Thin sub-mini 2m HT/TTP .....Δmwf		489.00	284 ⁹⁵
SOLARCON (SOL)		FREE CMP-115 from Standard - C-178A thru 8/31/95				\$25 coupon - C-188A thru 8/31/95 OR			
A-99 10m fiberglass base station antenna ...		C-228A 2m/220 FM HT/batt/cgr/TTP/CTCSS ..		695.00	CALL	FREE CMP-115 from Standard - C-188A thru 8/31/95			
GPK-1 Ground plane radial kit		\$30 coupon - C-228A thru 8/31/95 OR				C-288A Thin sub-mini 220 HT/batt/cgr/TTP ..		499.00	CALL
SOLDER-IT (SLD)		FREE CMP-115 from Standard - C-228A thru 8/31/95				CBT-181 Battery case for 4 AA		17.00	
ALP-21D Aluminum solder paste, 7.1gm		C-528A 2m/440 FM HT/batt/cgr/TTP/CTCSS ..		495.00	CALL	CBT-182 Battery case for 5 AA		27.00	
SP-7D Solder paste, 7.1 gm		\$25 coupon - C-528A thru 8/31/95 OR				CHP-111 Headset mic w/PTT switch		45.00	
SONY (SON)		FREE CMP-115 from Standard - C-528A thru 8/31/95				CHP-150 Headset mic w/VOX		81.00	
ICF-SW15 AM/FM/SW port receiver .....Dmwf		C-558A 2m/440 FM HT/batt/cgr/TTP/CTCSS ..		665.00	CALL	CLC-181 Carrying case w/CNB-181		21.00	
ICF-SW800 AM/FM/SW port/prog cards Dmwf		\$30 coupon - C-558A thru 8/31/95 OR				CLC-182 Carrying case w/CNB-182/3/4		24.00	
ICF-2010 AM/FM/SW/LW/air port Rcvr w/ps ..		FREE CMP-115 from Standard - C-558A thru 8/31/95				CMA-181 Mobile adapter		38.00	
ICF-SW10 AM/FM/SW compact receiver		\$30 coupon - C-558A thru 8/31/95 OR				CMP-111 Speaker/mic		54.00	
ICF-SW30 AM/FM/SW portable receiver		FREE CMP-115 from Standard - C-558A thru 8/31/95				CMP-113 Tie-pin spkr/mic		44.00	
ICF-SW33 AM/FM/SW portable receiver		C-628A 440/1.2 FM HT/batt/cgr/TTP/CTCSS ..		727.00	CALL	CMP-115 Mini speaker/mic		50.00	
ICF-SW55 AM/FM/SW portable receiver		CAX-02 Bottom cover		12.00		CMP-123 Ear phone spkr/mic		57.00	
ICF-SW77 AM/FM/SW portable receiver		CAX-03 Bottom cover		12.00		CMU-182 200 ch memory for C-188A/288A ..		44.00	
ICF-SW100S AM/FM/SW portable receiver		CAW-150 Mobile power supply cable		16.50		CNB-181 4.8v 700ma nicad battery		57.00	
ICF-SW7600G AM/FM/SW portable receiver ...		CAW-151 12vdc power supply cable		13.50		CNB-182 9.6v 600ma nicad battery		99.00	94 ⁹⁵
AC-E60HG 6vdc 400ma AC adapter		CAW-152 Cig cord w/filter		28.00		CNB-183 6v 1100ma nicad battery		95.00	89 ⁹⁵
AN-1 LW/MW/SW outdoor active rcv ant		CBT-151 Battery case		20.00		CNB-184 6v 700ma nicad battery		67.00	
AN-3 Aircraft active receive antenna		CBT-171 6 cell battery case		20.00		CSA-181A Desk rapid charger		124.00	119 ⁹⁵
AN-102 LW/MW/SW indoor active rcv ant		CBT-175 2 cell battery case		16.00		C-108A 200mw 2m FM HT		269.00	CALL
Following are SONY Consumer Products from our Audio Plus division. Please call them direct to order.		CHP-111 Headset mic w/PTT switch		45.00		C-508A 280mw 2m/440 FM HT		345.00	CALL
Ph. (800) 462-9489 • (414) 235-8934		CHP-150 Headset mic w/VOX		81.00		CBH-160 Molded belt clip		10.50	
See AUDIO PLUS Display Ad - p.158		CMB-600 Helmet clip for CHP-150		13.00		CHP-111 Headset mic w/PTT switch		45.00	
MINI DISC		CLC-171 Soft case for CNB-171		29.00		CHP-150 Headset mic w/VOX		81.00	
MZ-E2 Mini disc player		CLC-172 Soft case for CNB-172/173		29.00		CLC-401 Standard soft case; C-108A		14.00	
MZ-E3 Player only		CLC-175 Soft case for CBT-175		29.00		CLC-402 Dlx soft case w/belt loop; C-108A ..		22.00	
MZ-R2 Mini disc player/recorder		CLC-520 Std carrying case; 228A/528A		24.00		CLC-502 Standard soft case; C-508A		17.00	
MZ-R3 Recorder		CLC-521 Large carrying case; 228A/528A ..		27.00		CMP-111 Speaker/mic		54.00	
DISCMAN		CLC-550 Standard carrying case; 558A		27.00		CMP-113 Tie-pin spkr/mic		44.00	
D-131 1 bit w/mega bass		CLC-551 Large carrying case; 558A		30.00		CMP-115 Mini speaker/mic		50.00	
D-143 Mega bass, nicads		CLC-555GN Green carrying case .....Δfv		34.00	24 ⁹⁵	CMP-123 Ear phone spkr/mic		57.00	
D-235CK Car discman w/ESP		CLC-550R Orange carrying case		34.00		CMU-160 40 ch memory; 558A/168A		31.00	
D-335 Top of the line car discman, 1 bit 2xESP		CLC-560 Case; CBT-171/CNB-171; C-568A ..		24.00		CMU-161 200 channel memory		44.00	
D-848 Super ESP & wireless remote		CLC-561 Case; CNB-172/173 with C-568A ..		24.00		CNB-151 Extra 7.2v 700ma nicad batt		78.00	
AM/FM WALKMAN		CLC-562 Leather case; CBT-171/CNB-171 .		47.00		CNB-152 12v 600ma nicad battery		99.00	
SRFM33 Digital w/presets		CMB-111 Mobile bracket		21.00					
SRF36 FM only		CMB-112 Mounting bracket		26.00					
AM/FM CASSETTE WALKMAN		CMC-150 Mobile charger		27.00					
WMFX407 Dig/presets/auto rev/Dolby/mega bass		CMP-111 Speaker/mic		54.00					
\$ 89.99		CMP-113 Tie-pin spkr/mic		44.00					
69 ⁹⁵		CMP-115 Mini speaker/mic		50.00					
		CMP-123 Ear phone spkr/mic		57.00					
		CMU-160 40 ch memory; 558A/168A		31.00					
		CMU-161 200 channel memory		44.00					
		CNB-151 Extra 7.2v 700ma nicad batt		78.00					
		CNB-152 12v 600ma nicad battery		99.00					



Hi! I'm Jim, N4LJO...

So Habla Español

AES®

SERVICIOS INTERNACIONALES

1-407-888-1188

See p. 152

STANDARD - continued

CAW-572	13' mic extension cable	48.00	
CAW-579	Packet cable	27.00	
CRC-5700	Front panel w/freq display	228.00	209 ⁹⁵
CAW-573	6.5' front panel extension cable	27.00	
CAW-574	13' front panel extension cable	36.00	
CSK-12	External speaker	47.00	
CCR-708A	50-905 MHz spectral display Rcvr	750.00	CALL

STARTER (STR)

1350	1-1300 MHz frequency counter	\$129.00	119 ⁹⁵
ATH-10	1-1200 MHz freq counter w/ATH	179.00	149 ⁹⁵
ATH-15	1-1500MHz bar graph freq counter	235.00	189 ⁹⁵
ATH-15/OS	1-1500MHz ctr w/1-shot opt	275.00	229 ⁹⁵
ATH-15/OS/HS	1500MHz/1-shot/hi stab	375.00	329 ⁹⁵
ATH-30	1-2800MHz bar graph ctr w/1-shot	299.00	249 ⁹⁵
ATH-30/HS	2800MHz/1-shot/hi-stability	399.00	339 ⁹⁵
ATH-50	5Hz-2800MHz bar/auto trig/hi speed	339.00	289 ⁹⁵
ATH-50/HS	2800MHz/trig/hi spd/hi stability	439.00	379 ⁹⁵
APA-9	9vdc auto power adapter	6.00	
BP-150	130 - 500 MHz bandpass filter	49.00	
CC-90	Carrying case	12.00	
DC-5	BNC to clip leads cable	12.00	
DC-10	Direct probe	22.00	
HP-400	400 - 1500 MHz bandpass filter	49.00	
HP-800	800 MHz - 2 GHz bandpass filter	49.00	
LP-22	Lo-pass probe	29.00	
LP-60	DC - 60 MHz bandpass filter	49.00	
M-207-IC	Interface cable	10.00	
P-110	200 MHz X1-X10 probe	69.00	39 ⁹⁵
RD-2750	27-50MHz rubber duck antenna	19.00	
RD-150	150MHz rubber duck antenna	16.00	
RD-450	450MHz rubber duck antenna	16.00	
RD-800	800MHz rubber duck antenna	16.00	
TA-90	Telescopic antenna	12.00	
TA-90L	Right angle telescopic antenna	16.00	

SWIECH (SWE)

COY2M3EL	3 element 2m beam	\$ 64.95	
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TAB Books (TAB)

How to be a Ham 3rd Edition	Dm	\$ 13.60	
447748	Shortwave Listener's Q & A Book	12.95	
633626	Radio Amateur's Digital Comm Handbook	14.95	
640967	Amateur Radio Encyclopedia	29.95	
641351	Shortwave Radio Listening for Beginners	10.95	
643478	Complete SW Listener's Handbook	19.95	
643540	Beginner's Handbook of Amateur Radio	21.95	
765340	Build Your Own Shortwave Antennas	16.95	

TEMPO (TEM)

BP-15	Extra battery pack; S-15/S-15T	Δm	\$ 39.00	34 ⁹⁵
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TIMEWAVE (TIM)

DSP-9	Digital signal processing unit	\$169.00	
DSP-9 PLUS	Advanced dig sig processing unit	219.00	
DSP-59 PLUS	Dlx dig signal processing unit	299.00	
Upgrade DSP-9 to ver 2.0 upgrade kit	m	30.00	

TUBES (TUB)

6146B	Tube	each	\$ 14.95	
12BY7A	Tube	each	12.95	
3-500G	High dissipation tube (3-500Z)	each	99.95	
572B	For Yaesu, etc.	each	49.95	
811A	For Collins, etc.	each	14.95	

Also see EIMAC

TUNE BELT (TUN)

HH-1PS	Up to 5" HT radio belt	\$ 16.95	
HH-1PM	Up to 6" HT radio belt	16.95	
HH-1PL	Up to 7" HT radio belt	16.95	
HH-2PM	Up to 6" HT radio belt w/batt pocket	17.95	
HH-2PL	Up to 8" HT radio belt w/batt pocket	17.95	



Apply for your
AES® CREDIT CARD
Application on p. 156



US TOWER (UST)

FREE STANDING CRANK-UPS (T-X not recommended)

TX-438	38' crank-up tower	T 1133.00	1019
TX-455	55' crank-up tower	T 1710.00	1499
TX-472	72' crank-up tower	T 2810.00	2529
TX-472MDP	72' crank-up w/motor drive	T 4521.00	4068
TX-489	89' crank-up tower	T 4888.00	4399
TX-489MDPL	89' crank-up w/motor drive	T 7332.00	6598

FREE STANDING HEAVY DUTY CRANK-UP TOWERS

HDX-538	38' crank-up tower	T 1466.00	1319
HDX-555	55' crank-up tower	T 2566.00	2309
HDX-572	72' crank-up tower	T 4399.00	3959
HDX-572MDPL	72' crank-up w/motor drive	T 6721.00	6048
HDX-589MDPL	89' crank-up w/motor drive	T 8799.00	7919
HDX-689MDPL	89' HD crank-up w/motor	T 16999.00	15299
HDX-5106MDPL	106' HD crank-up w/motor	T 18499.00	16649

COMPACT TMM (Top mount rotor for full retraction)

TMM-433SS	33' crank-up tower	T 1210.00	1089
TMM-433HD	33' HD crank-up tower	T 1466.00	1319
TMM-541SS	41' crank-up tower	T 1588.00	1429

ACCESSORIES FOR CRANK-UP TOWERS

CX-2	Coax arms (2) for 2-section tower	\$ 49.00	
CX-3	Coax arms (3) for 3-section tower	69.00	
CX-4	Coax arms (4) for 4-section tower	109.00	
CX-5	Coax arms (5) for 5-section tower	149.00	134
CX-6	Coax arms (6) for 6-section tower	189.00	170
HDP	Service platform	T 739.00	665
STS-4	Rotor accessory for TX/TMM towers	T 210.00	189
IV-16	Inverted vee arm for MA's	37.00	
M-5	2" OD 5' mast extension for MA's	36.00	
M-10	2" OD 10' mast	T 69.00	
M-15	2" OD 15' mast	T 103.00	
M-20	2" OD 20' mast	T 136.00	122
M-15R	2" OD 15' reinforced mast	T 155.00	140
M-20R	2" OD 20' reinforced mast	T 205.00	184
CM-20	2" OD 20' .375 wall mast	T 449.00	404
MD-75	Heavy duty 1 HP motor drive	T 989.00	890
MDP-750	Pull-down drive; TX-472/HDX-555	T 1539.00	1385
MDPL-1000	Pull-down drive; HDX-572	T 2089.00	1880
MRF	Mast raising fixture	266.00	239
MCL-100	Limit switch package	432.00	388
RMC-1000	Remote control w/limit switch	989.00	890
RP-3	Rotor plate for 10" section	20.00	
RP-4	Rotor plate for 12 1/2" section	26.00	
RP-5	Rotor plate for 15" section	32.00	
TRX-80	Raising fixture; TX-438/455; HDX-538/555	T 431.00	387
TRX-80HD	Raising fixture; TX-472/489; HDX-572/589	T 567.00	510
TRX-100HD	Raising fixture; HDX-689/5106	T 799.00	719
TB-2US	Thrust bearing; 2" mast w/2 flange holes	98.00	

MA-SERIES TUBULAR TOWERS

MA-40	40' crank-up mast	T \$899.00	679
MA-550	55' crank-up mast	T 1521.00	1069
MA-550MDP	55' crank-up mast w/motor	T 2909.00	2618
MA-770	70' crank-up mast	T 2509.00	2258
MA-770MDP	70' crank up mast w/motor	T 3969.00	3572
MA-850MDP	85' crank-up mast w/motor	T 5349.00	4814

MA-SERIES ACCESSORIES

CX-2M	Coax arms (2) for MA-40	\$ 53.00	
CX-3M	Coax arms (3) for MA-550	79.00	
CX-4M	Coax arms (4) for MA-770	132.00	119
CX-5M	Coax arms (5) for MA-850	159.00	143
MAB-40	Hinged base for MA-40	T 359.00	323
MAB-550	Hinged base for MA-550	T 429.00	386
MAB-770	Hinged base for MA-770	T 519.00	467
MAB-850	Hinged base for MA-850	T 629.00	566
MAF-40	Raising fixture for MA-40	220.00	198
MAF-550	Raising fixture for MA-550	T 304.00	273
MAF-770	Raising fixture for MA-770	T 309.00	278
MAF-850	Raising fixture for MA-850	T 409.00	368
MARB-40	Rotor base accessory for MA-40	T 549.00	494
MARB-550	Rotor base accessory for MA-550	T 649.00	584
MARB-770	Rotor base accessory for MA-770	T 769.00	692
MARB-850	Rotor base accessory for MA-850	T 909.00	818

All US TOWER products are drop-shipped (shipped direct to you from the US TOWER factory). On these factory drop-shippments we prefer payment in full with order, however, we will accept your

US TOWER - continued

credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipper merchandise. Shipment is FOB Visalia, California via truck. COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery of these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

UNADILLA (See W2AU)

Unified Microsystems (UNM)

W9XT	Contest card for IBM PC & compatible	\$149.95	139 ⁹⁵
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Universal Towers (UNT)

4-30	4 sq ft wind load 30' alum tower	T \$335.00	302
9-30	9 sq ft wind load 30' alum tower	T 451.00	406
12-30	12 sq ft wind load 30' alum tower	T 593.00	534
21-30	21 sq ft wind load 30' alum tower	T 704.00	634
23-30	23 sq ft wind load 30' alum tower	T 932.00	839
35-30	35 sq ft wind load 30' alum tower	T 1050.00	945
4-40	4 sq ft wind load 40' alum tower	T 562.00	506
7-40	7 sq ft wind load 40' alum tower	T 706.00	635
9-40	9 sq ft wind load 40' alum tower	T 787.00	708
12-40	12 sq ft wind load 40' alum tower	T 932.00	839
15-40	15 sq ft wind load 40' alum tower	T 1042.00	938
21-40	21 sq ft wind load 40' alum tower	T 1157.00	1041
23-40	23 sq ft wind load 40' alum tower	T 1385.00	1247
4-50	4 sq ft wind load 50' alum tower	T 792.00	713
5-50	5 sq ft wind load 50' alum tower	T 900.00	810
7-50	7 sq ft wind load 50' alum tower	T 1013.00	912
9-50	9 sq ft wind load 50' alum tower	T 1126.00	1013
15-50	15 sq ft wind load 50' alum tower	T 1496.00	1346
16-50	16 sq ft wind load 50' alum tower	T 1614.00	1453
4-60	4 sq ft wind load 60' alum tower	T 1127.00	1014
6-60	6 sq ft wind load 60' alum tower	T 1382.00	1244
7-60	7 sq ft wind load 60' alum tower	T 1471.00	1324
9-60	9 sq ft wind load 60' alum tower	T 1577.00	1419
3-70	3 sq ft wind load 70' alum tower	T 1469.00	1322
4-70	4 sq ft wind load 70' alum tower	T 1805.00	1625
6-70	6 sq ft wind load 70' alum tower	T 1838.00	1654
7-70	7 sq ft wind load 70' alum tower	T 1922.00	1729
3-80	3 sq ft wind load 80' alum tower	T 1920.00	1728
4-80	4 sq ft wind load 80' alum tower	T 2293.00	2064
2-90	2 sq ft wind load 90' alum tower	T 2375.00	2138
B-14	Base for tower	60.58	55
B-18	Base for tower	60.58	55
B-22	Base for tower	106.04	95
B-26	Base for tower	136.33	123
RFM-14	Flat roof mt for guyed tower	42.32	38
RFM-18	Flat roof mt for guyed tower	66.69	60
RFM-22	Flat roof mt for guyed tower	99.96	90
RFM-26	Flat roof mt for guyed tower	133.33	120
R-11	Rotor mount	30.27	27
R-14	Rotor mount	45.33	41
R-18	Rotor mount	60.58	55

SEE LITERATURE FOR CONFIGURATION OF TOWERS

11 Top	11" top tower section	T 113.66	102
14 Top	14" top tower section	T 143.22	129
18 Top	18" top tower section	T 259.72	234
14 Taper	14" taper tower section	T 126.00	113
18 Taper	18" taper tower section	T 226.00	203
22 Taper	22" taper tower section	T 337.00	303
26 Taper	26" taper tower section	T 453.00	408
11 Straight	11" straight tower section	T 112.00	101
14 Straight	14" straight tower section	T 126.00	113
18 Straight	18" straight tower section	T 226.00	203
22 Straight	22" straight tower section	T 337.00	303
26 Straight	26" straight tower section	T 453.00	408
HD35-40	35 sq ft wind load 40' alum tower	T 1616.00	1454
HD21-50	21 sq ft wind load 50' alum tower	T 1724.00	1552
HD9-60	9 sq ft wind load 60' alum tower	T 1808.00	1627
HD16-60	16 sq ft wind load 60' alum tower	T 2178.00	1960
HD21-60	21 sq ft wind load 60' alum tower	T 2295.00	2065
HD8-70	8 sq ft wind load 70' alum tower	T 2034.00	1831
HD12-70	12 sq ft wind load 70' alum tower	T 2519.00	2267

UNIVERSAL - continued		Reg	Sale	VAN GORDEN - continued		Reg	Sale	WELLER - continued		Reg	Sale
HD17-70	17 sq ft wind load 70' alum tower T	2749.00	2474	213-100ST	100' RG-213 coax/silver teflon PL259s	72.00		WSTA3	Pyropen portable LP soldering iron	121.06	74 ⁹⁵
HD21-70	21 sq ft wind load 70' alum tower T	2864.00	2578	Vectronics by VALOR (VAL)				WST2	Pyropen Jr. portable butane iron	97.20	64 ⁹⁵
HD8-80	8 sq ft wind load 80' alum tower	2603.00	2343	VC-300M	300w mobile antenna tuner	\$139.95	119 ⁹⁵	YAESU (YAE)			
HD9-80	9 sq ft wind load 80' alum tower	2716.00	2444	VC-300DLP	300w antenna tuner	169.95	144 ⁹⁵	FT-1000	Xcvr w/ps/tuner/keyer/mic/XF-AB	4229.00	CALL
HD11-80	11 sq ft wind load 80' alum tower T	3085.00	2777	VC-300D	300w digital antenna tuner	219.95	186 ⁹⁵	\$100 coupon - FT-1000 thru 5/20/95			
HD12-80	12 sq ft wind load 80' alum tower T	3090.00	2781	HFT-1500	1.5kw antenna tuner	459.95	389 ⁹⁵	BPF-1	Dual bandpass filter; crossband rcv	199.00	179 ⁹⁵
HD16-80	16 sq ft wind load 80' alum tower T	3317.00	2985	AT-100	.3-30 MHz active antenna/tuner	85.95	74 ⁹⁵	TCXO-1	Temperature compensated xtal osc	249.00	229 ⁹⁵
HD4-90	4 sq ft wind load 90' alum tower	2710.00	2439	Vector 500	600w HF amplifier	1395.00	1195	XF-C	2.4 KHz SSB xtal filter (455 KHz)	179.00	159 ⁹⁵
HD8-90	8 sq ft wind load 90' alum tower	3198.00	2878	HF-600QSK	1kw HF amplifier w/QSK	1995.00	1595	XF-D	2 KHz SSB xtal filter (455 KHz)	179.00	159 ⁹⁵
HD11-90	11 sq ft wind load 90' alum tower T	3656.00	3290	HPF-1	High pass filter	19.95	17 ⁹⁵	YF-110C/XF-E	500 Hz CW xtal filter (455 KHz)	179.00	159 ⁹⁵
HD4-100	4 sq ft wind load 100' alum tower T	3630.00	3267	LP-30	1.5kw low pass filter	69.95	59 ⁹⁵	FT-1000D	Dlx Xcvr w/BPF/TCXO/XF-ABCDE	5359.00	CALL
HD8-100	8 sq ft wind load 100' alum tower T	3884.00	3496	LP-2500	2.5kw low pass filter	139.95	119 ⁹⁵	\$100 coupon - FT-1000D thru 5/20/95			
B-30	Base for HD tower	212.57	191	CK-200	Deluxe keyer	89.95	79 ⁹⁵	DVS-2	Digital voice recording module	329.00	289 ⁹⁵
RFM-30	Flat roof mt for guyed tower	186.52	168	DL-300M	300w dummy load	43.95	39 ⁹⁵	FIF-232C	Interface for RS-232	129.00	119 ⁹⁵
1-5/8SC	Flange bearing	90.70	81	DL-650M	1.5kw dummy load	74.95	64 ⁹⁵	MD-1C8	Desk microphone	139.00	129 ⁹⁵
2-3/16SC	Flange bearing	116.52	104	DL-2500	2.5kw dummy load	199.95	169 ⁹⁵	SP-5	External spkr w/audio filter	179.00	169 ⁹⁵
Top Plate	Flange plate welded to top section	21.24	19	PM-30HF	300/3kw HF wattmeter	99.95	84 ⁹⁵	LL-5	Phone patch unit for SP-5	159.00	149 ⁹⁵
SEE LITERATURE FOR CONFIGURATION OF TOWERS				PM-30UV	30/300w VHF/UHF wattmeter	99.95	84 ⁹⁵	XF-455MC	600Hz CW filter (455KHz); subrcvr	189.00	169 ⁹⁵
30 Taper	30" taper tower section	570.00	513	VIBROPLEX (VIB)				YF-110CN/XF-F	250 Hz CW xtal filter (455 KHz)	189.00	169 ⁹⁵
30 Straight	30" straight tower section	570.00	513	100	Original Presentation Super deluxe bug	\$195.00	184 ⁹⁵	YH-77ST	Open-air type stereo headphones	55.00	
1-1/4" OD x 10 ft aluminum mast		30.27	27	105	Original Deluxe Bug	120.00		FT-990DC	Xcvr w/tuner & mic	2319.00	CALL
1-1/2" OD x 10 ft aluminum mast		37.84	34	110	Original Standard Bug	99.00		\$100 coupon - FT-990DC thru 5/20/95			
2" OD x 8 ft aluminum mast		45.41	41	115	VibroKeyer Deluxe Paddle	115.00		FP-25	Internal power supply for FT-990DC	369.00	329 ⁹⁵
2" OD x 16 ft aluminum mast		90.88	82	120	VibroKeyer Standard Paddle	89.00		FP-800	20A heavy duty ps for FT-990DC	329.00	289 ⁹⁵
All UNIVERSAL TOWERS products are drop-shipped (shipped direct to you from the UNIVERSAL TOWERS factory). On these factory drop-shippments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Mt. Clemens, Michigan via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.				125	Iambic Presentation Paddle	160.00		XF-109C	500 Hz CW filter for FT-990DC	149.00	139 ⁹⁵
				130	Iambic Deluxe Paddle	115.00		FT-990	Xcvr w/ps/tuner/mic/CW filter	2759.00	CALL
				135	Iambic Standard Paddle	95.00		\$100 coupon - FT-990 thru 5/20/95			
				140	EK-1 Iambic keyer w/paddle	145.00		DVS-2	Digital voice recording module	329.00	289 ⁹⁵
				145	Brass Racer Iambic paddle	65.00		FIF-232C	Interface for RS-232	129.00	119 ⁹⁵
				W2AU (Unadilla) (W2A)				MD-1C8	Desk microphone	139.00	129 ⁹⁵
				W2AU 1:1	160-10m balun, lightning arrestor	\$21.00		SP-6	External speaker w/filter	179.00	169 ⁹⁵
				W2AU Beam Balun	1:1	21.00		LL-5	Phone patch unit for SP-6	159.00	149 ⁹⁵
				W2AU 4:1	160-10m balun, lightning arrestor	21.00		TCXO-2	Temp compensated xtal oscillator	219.00	199 ⁹⁵
				W2DU-HF	1:1 1.8-30 MHz choke balun	23.00		XF-10.9M-202-01	2nd IF 2 KHz SSB filter	149.00	139 ⁹⁵
				W2DU Beam Balun	40-10m 1:1 choke balun	23.00		XF-110CN	455 KHz 250 Hz CW filter	189.00	169 ⁹⁵
				W2DU-VHF	1:1 30-250 MHz choke balun	23.00		YH-77ST	Open-air type stereo headphones	55.00	
				HA	AN-sulator center insulator	8.00		2M/767	(FEX-767-2M) 2m mod; 767	269.00	249 ⁹⁵
				HE	END-sulator end insulators	4.00		430/767	(FEX-767-70B) 430-440 mod	349.00	319 ⁹⁵
				KW-80CW	Reyco 80m CW ant traps	44.00	39 ⁹⁵	SP-767P	Speaker/patch for FT-767GX	139.00	129 ⁹⁵
				KW-80F	Reyco 75m phone ant traps	44.00		FT-900	Xcvr/remote front panel/mic	1519.00	CALL
				KW-40	Reyco 40m antenna traps	40.00		\$50 coupon - FT-900 thru 5/20/95			
				KW-30	Reyco 30m antenna traps	40.00		ATU-2	Internal antenna tuner	279.00	249 ⁹⁵
				KW-20	Reyco 20m antenna traps	39.00		FT-900/AT	Xcvr/remote front/mic/auto tuner	1719.00	CALL
				KW-17	Reyco 17m antenna traps	39.00		\$50 coupon - FT-900/AT thru 5/20/95			
				KW-15	Reyco 15m antenna traps	39.00		YK-900	remote kit FREE with FT-900/AT! Limited Time!		
				KW-12	Reyco 12m antenna traps	39.00		FP-800	20A heavy duty power supply	329.00	289 ⁹⁵
				KW-10	Reyco 10m antenna traps	39.00		DVS-2	Digital voice recording module	329.00	289 ⁹⁵
				W2AU/W2VS	5-band ant kit (use tuner)	75.00		FC-800	External long wire auto tuner	539.00	469 ⁹⁵
				WABER AC OUTLET STRIPS (WAB)				FIF-232C	Interface for RS-232	129.00	119 ⁹⁵
				3SP	3 outlet/breaker/switch/light	\$16.60	6 ⁹⁵	MD-1C8	Desk microphone	139.00	129 ⁹⁵
				4S	4 outlet/breaker/switch	16.60	6 ⁹⁵	CT-20	Mic cable for use with MD-1C8	15.00	
				5	5 outlet w/breaker	16.60	6 ⁹⁵	MH-31A8J	Extra hand microphone	40.00	
				6SP	6 outlet/breaker/switch/light	19.95	8 ⁹⁵	MMB-20	Mobile mount	30.00	
				7S	7 outlet/breaker/switch	19.95	9 ⁹⁵	SP-6	External speaker w/filter	179.00	169 ⁹⁵
				WAHL (WAH)				LL-5	Phone patch unit for SP-6	159.00	149 ⁹⁵
				7740	Quick charge cordless soldering iron kit	\$39.95	34 ⁹⁵	SP-7	Mobile speaker	39.00	
				7980	Butane soldering iron and torch	29.95		TCXO-3	TCXO unit	119.00	109 ⁹⁵
				7985	Butane iron/torch kit package w/case	54.95	49 ⁹⁵	XF-110C	455 KHz 500 Hz CW filter	179.00	159 ⁹⁵
				WALNUT CREEK (WAL)				XF-110CN	455 KHz 250 Hz CW filter	189.00	169 ⁹⁵
				CICA	650 MB of current Windows shareware	\$29.95		XF-110S	455 KHz 2.6 KHz SSB filter	189.00	169 ⁹⁵
				Garbo	250 MB DOS + 150 MB Mac programs	29.95		YF-100	2nd IF 500 Hz CW filter	139.00	119 ⁹⁵
				Giga Games	3,000 DOS/Windows games	39.95	29 ⁹⁵	YF-101	2nd IF 2.6 KHz SSB filter	179.00	169 ⁹⁵
				Ham QRZ	US & Canada calls plus programs	29.95		YA-007FG	Mobile fg 3-30 MHz whip ant	159.00	149 ⁹⁵
				Hobbes	Thousands of OS/2 applications	29.95		YH-77ST	Open-air type stereo headphones	55.00	
				Simtel	650 MB current DOS programs	34.95	29 ⁹⁵	YK-900	20' remote mtg kit w/tkn mtg bkt	59.00	
				WELLER (WEL)				MMB-62	Remote control panel bracket	29.00	
				7200PK	75w soldering gun kit	\$33.94	26 ⁹⁵	FT-890/AT	Xcvr/1.1-30MHz Rcvr/tuner/mic Dmwfv	1699.00	1399
				EG-1002-1	40w temp controlled solder stn	289.50	189 ⁹⁵	\$150 coupon - FT-890/AT until gone!			
				WP-25	25w professional soldering iron	38.36	29 ⁹⁵	<div>  <div> <p>Hi!... I'm Dave AB4ZR</p> <p>Call us Toll Free and shop the easy way!</p> </div> </div>			
				W-60P	60w temp controlled soldering iron	73.66	59 ⁹⁵				
				W-100PG	Hvy duty 100w temp control iron	72.30	34 ⁹⁵				
				WTCPT	60w temp controlled soldering stn	167.12	109 ⁹⁵				

YAESU - continued

FP-800 20A heavy duty power supply	329.00	289 ⁹⁵
DVS-2 Digital voice recording module	329.00	289 ⁹⁵
FC-800 External long wire auto tuner	539.00	469 ⁹⁵
FIF-232C Interface for RS-232	129.00	119 ⁹⁵
FRB-757 External relay box	39.00	
MD-1C8 Desk microphone	139.00	129 ⁹⁵
MH-188 Extra hand microphone	39.00	
MMB-20 Mobile mount	30.00	
SP-6 External speaker w/filter	179.00	169 ⁹⁵
LL-5 Phone patch unit for SP-6	159.00	149 ⁹⁵
SP-7 Mobile speaker	39.00	
TCXO-3 TCXO unit	119.00	109 ⁹⁵
XF-455K-251-01 2nd IF 250Hz CW filt Dmwf	189.00	159 ⁹⁵
YA-007FG Mobile fiberglass HF whip ant	159.00	149 ⁹⁵
YF-100 2nd IF 500 Hz CW filter Dmwf	139.00	119 ⁹⁵
YF-101 2nd IF 2.6 KHz SSB filter	179.00	169 ⁹⁵
YH-77ST Open-air type stereo headphones	55.00	
FT-840 Xcvr/SW Rcvr	1099.00	CALL

\$50 coupon - FT-840 thru 5/20/95

FP-800 20A heavy duty power supply	329.00	289 ⁹⁵
FC-10 External coax fed auto tuner	399.00	349 ⁹⁵
FC-800 External long wire auto tuner	539.00	469 ⁹⁵
FIF-232C Interface for RS-232	129.00	119 ⁹⁵
FM-747 FM unit	79.00	
MD-1C8 Desk microphone	139.00	129 ⁹⁵
MMB-20 Mobile mount	30.00	
SP-6 External speaker w/filter	179.00	169 ⁹⁵
SP-7 Mobile speaker	39.00	
TCXO-4 TCXO unit	119.00	109 ⁹⁵
YA-007FG Mobile fiberglass HF whip ant	159.00	149 ⁹⁵
YF-112A 6 KHz AM filter	139.00	129 ⁹⁵
YF-112C 500 Hz CW filter	139.00	129 ⁹⁵
YH-77ST Open-air type stereo headphones	55.00	
FP-757HD Heavy duty ps/fan/spkr Dmwf	349.00	279 ⁹⁵
FP-700 Power supply	279.00	239 ⁹⁵
FC-757AT Auto ant tuner w/memory	585.00	499 ⁹⁵
TCXO-747 Increased stability unit; 747	42.00	34 ⁹⁵

FL-7000 Solid state amp w/auto ant tuner	2459.00	CALL
CT-11 Cable - FL-7000 to FT-890/900	20.00	
E-767 Cable - FL-7000 w/FT-767/990/1000	25.00	
FAS-1-4R Remote antenna selector	149.00	139 ⁹⁵
DC-8800 DC kit for FRG-8800	4.00	1 ⁹⁵
FRG-100B 1-30 MHz shortwave receiver	719.00	CALL
FM Unit-100 FM unit	49.00	
TCXO-4 TCXO unit	119.00	109 ⁹⁵
YF-110C/XF-E 500 Hz CW xtal filter	179.00	159 ⁹⁵
YF-110CN/XF-F 250 Hz CW xtal filter	189.00	169 ⁹⁵
YA-30 1.8-30 MHz broadband dipole ant	255.00	219 ⁹⁵
YH-55 Lo-Z headphones	40.00	
YH-77 Lightweight headphones	34.00	
YS-60 1.8-60 MHz 2kw PEP wattmeter	139.00	129 ⁹⁵
YS-500 140-520 MHz 200w PEP wattmeter	119.00	109 ⁹⁵

FT-650 100w 12/10/6m Xcvr w/ps	1899.00	CALL
DVS-2 Digital voice recording module	329.00	289 ⁹⁵
MD-1C8 Desk microphone	139.00	129 ⁹⁵
SP-5 External spkr w/audio filter	179.00	169 ⁹⁵
LL-5 Phone patch unit for SP-5	159.00	149 ⁹⁵
XF-455M6 600 Hz CW filter	169.00	149 ⁹⁵
FT-736R 25w 2m/430 full dplx Xcvr/ps/mic	2349.00	CALL
AD-3 100w 2m/440 duplexer	56.00	
E-736 DC cable	15.00	
FEX-736-50 6m module	349.00	309 ⁹⁵
FEX-736-220 220 MHz module	369.00	329 ⁹⁵
FEX-736-1.2 1.2 GHz module	619.00	539 ⁹⁵
FIF-232C Interface for RS-232	129.00	119 ⁹⁵

Reg Sale

YAESU - continued

FTS-8 Encoder/decoder	59.00	
FVS-1A Voice synthesizer	39.00	
Keyer-B Electronic keyer unit	29.00	
MD-1C8 Desk microphone	139.00	129 ⁹⁵
MH-188 Extra hand microphone	39.00	
SP-767 Speaker w/audio filters	119.00	109 ⁹⁵
TV-736 1.2 GHz ATV converter	179.00	159 ⁹⁵
FT-690R Mk II 10w 6m FM/SSB Xcvr/TTP	889.00	CALL
FT-290R Mk II 25w 2m FM/SSB Xcvr/TTP	749.00	CALL
FT-790R Mk II 25w 430-450 FM/SSB/TTP	869.00	CALL
CSC-19 Soft case	23.00	
FBA-8 Holder for 9 C-cell nicads	44.00	
NC-26B Wall charger for FBA-8	14.00	
FTS-7A Encoder/decoder; current units	42.00	
FT-5100 50/35w 2m/440 FM Xcvr/TTP mic	799.00	CALL
\$50 coupon - FT-5100 thru 5/20/95		
FT-5200 50/35w 2m/440 FM Xcvr/TTP mic	839.00	CALL
\$50 coupon - FT-5200 thru 5/20/95		
FT-6200 35/10w 440/1.2GHz FM Xcvr/TTP	899.00	CALL
DVS-3 Digital voice memory unit	149.00	139 ⁹⁵
FRC-4 DTMF pager unit	45.00	
FTS-22 CTCSS decode unit	65.00	
MH-27B8 Extra TTP mic w/8-pin plug	61.00	
MW-1 Wireless remote control mic Dwf	116.00	99 ⁹⁵
MW-2* Wireless remote control mic	149.00	139 ⁹⁵

* Requires jumper modification

MMB-53 Mobile mtg bkt for MW-1/2	7.00	
SP-7 External speaker	39.00	
YSK-1L Sep kit w/18' cable; FT-5200/6200	59.00	
FT-8500 50/35w 2m/440 FM Xcvr/TTP mic	849.00	CALL
FTS-22 CTCSS decode unit	65.00	
MMB-60 Quick release mobile bracket	26.00	
SP-7 External speaker	39.00	
YSK-8500 Remote separation kit	99.00	
MMB-62 Remote control panel bracket	29.00	
FT-912RH 10w 1.2 GHz FM Xcvr w/TTP mic	749.00	CALL
AD-3 100w 2m/440 duplexer	56.00	
DVS-1 Digital voice memory module Δmwf	109.00	19 ⁹⁵
FTS-12 Decoder; 121RH/712RH/912RH	61.00	
MH-15C8 Extra TTP microphone	56.00	
MH-15D8 Autodial TTP microphone	82.00	
FT-7400H 35w 440 FM Xcvr w/TTP mic	609.00	CALL
2400 Mic Cable 2' packet cable	9.00	
FRC-6 DTMF pager unit	45.00	
FTS-17A CTCSS decode unit	62.00	
MH-27A8J Extra TTP mic w/modular plug	64.00	
SP-7 External speaker	39.00	
FT-2500M 50w 2m FM Xcvr w/TTP mic	459.00	CALL

\$30 coupon - FT-2500M thru 5/20/95

2400 Mic Cable 2' packet cable	9.00	
FT-2200 50w 2m FM Xcvr w/TTP mic	489.00	CALL
\$30 coupon - FT-2200 thru 5/20/95		
FT-7200 35w 440 FM Xcvr w/TTP mic	619.00	CALL
DVS-3 Digital voice memory unit	149.00	139 ⁹⁵
FTS-27 CTCSS decode unit	61.00	
MW-2 Wireless remote control microphone	149.00	139 ⁹⁵
MMB-53 Mobile mtg bkt for MW-2	7.00	
SP-7 External speaker	39.00	
SP-3 Small mobile speaker	24.00	
SP-4 Mobile speaker	32.00	
VXR-5000VADC 25w 2m FM repeater	1399.00	CALL
VXR-5000UCDC 25w 440 FM repeater	1399.00	CALL
MR-KIT1 19" rack mtg kit; VXR repeater	218.00	199 ⁹⁵
PROG DISK-A Rptr programming software	15.00	
VX VPL-1 PC programming cable	55.00	

Reg Sale

YAESU - continued

Accessories for FT-208R/708R		Reg	Sale
FNB-2A Nicad battery pack		\$ 53.00	
YM-24A Speaker/microphone	Dm	39.95	
Accessories for 09-series/03-series			
FNB-4A 500ma 12v battery		\$ 65.00	
FTS-6 Encoder/decoder; 09-series	Dm	56.00	
MMB-21 Mobile bracket	Dm	16.00	
NC-9B Wall charger for FNB-3/3A	Dm	14.00	
PA-3 Mobile adapter and charger	Dm	28.00	
FT-76/25 2w 440 FM HT/batt/cgr	Dw	329.00	249 ⁹⁵
FT-530 2m/440 FM HT/batt/cgr/TTP		589.00	CALL
\$50 coupon - FT-530 thru 5/20/95			
FT-815 2w 440 FM HT/batt/cgr/TTP	Dv	449.00	299 ⁹⁵
FT-816 2w black 440 HT/batt/cgr/TTP	Dmwf	469.00	299 ⁹⁵
CA-8 2 charging sleeves; NC-50/416/530		25.00	
CLIP-3 Belt clip		7.00	
CSC-50 Vinyl case; 415/416 w/FNB-25		22.00	
CSC-52 Vinyl case; 415/416 w/FNB-26/27		22.00	
CSC-53 Vinyl case; 26/76/FNB-25	Δmwf	22.00	14 ⁹⁵
CSC-55 Case; 26/76 w/FNB-26/27	Δmwf	22.00	14 ⁹⁵
CSC-56 Vinyl case; 530 w/FNB-25		22.00	
CSC-58 Vinyl case; 530 w/FNB-26/27		22.00	
EDC-5B DC adapter w/noise filter		25.00	
EDC-6 DC adapter; plug & wire only		7.00	
FBA-12 AA cell holder		23.00	
FNB-25 600ma 7.2v nicad battery		55.00	
FNB-26 1000ma 7.2v nicad battery		83.00	
FNB-27 600ma 12v nicad battery (5w)		83.00	
FTS-17A CTCSS encode/decode unit		62.00	
MH-12A2B Speaker/microphone		50.00	
MH-19A2B Earpiece/microphone		46.00	
MH-29A2B LCD display spkr/mic; 530		109.00	
MH-32A2B Compact lapel speaker/mic		40.00	
MMB-49 Mobile mounting bracket	Dwf	18.00	14 ⁹⁵
MMB-54 Mobile mtg bracket; FT-26/530		26.00	
NC-18B Wall charger for FNB-27		16.00	
NC-28B Wall charger for FNB-25/26		16.00	
NC-42 1 hour desk quick charger	Δmwf	105.00	99 ⁹⁵
NC-50 1-hour dual slot charger		109.00	
YH-2 Lightweight VOX headset w/mic		35.00	
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FT-23R-12 5w 2m FM HT/FNB-12S/cgr		339.00	CALL
FT-33R 5w 220 FM HT/batt/cgr		369.00	CALL
FT-411E 2.5w 2m FM HT/FNB-17/cgr/TTP		379.00	CALL
FT-811 2w 440 FM HT/batt/cgr/TTP	Δmwf	394.00	259 ⁹⁵
\$25 coupon - FT-811 until gone!			
FT-911 1w 1.2 GHz FM HT/batt/cgr/TTP		569.00	CALL
Accs for FT-23R/33R/73R/411E/811/470/911			
CA-7 2 charging sleeves; NC-50/411E/470		\$ 25.00	
CLIP-1 Belt clip		8.00	
CSC-28 Soft case; FT-23R w/FNB-12S		22.00	
CSC-35 Soft case; FT-411E w/FNB-17		22.00	
CSC-37 Soft case; FT-411E w/FNB-12S/14		22.00	
CSC-43 Soft case; FT-470 w/FNB-9/17		22.00	
CSC-45 Soft case; FT-470 w/FNB-12S/14		22.00	
CSC-48 Soft case; 23R w/FNB-17		22.00	
FBA-17 AA battery holder		25.00	
FNB-12S 600ma 12v (5w) battery		71.00	
FNB-14 1000ma 7.2v battery		71.00	
FNB-17 600ma 7.2v battery		52.00	
FTS-12 Encoder/decoder for FT-23R/33R/73R		61.00	
FTS-17A Tone squelch/pager; FT-411E		62.00	
FTT-4 DTMF (TTP) unit for FT-23R		61.00	
MH-12A2B Speaker/microphone		50.00	
MH-19A2B Earpiece/microphone		46.00	

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YAESU - continued		Reg Sale	YAESU - continued		Reg Sale	CLOSE-OUTS - continued		Reg Sale	
MH-32A2B	Compact lapel speaker/mic	40.00	G-5400B	Light/med 11sq ft az/el//2x8-wire ..	609.00	CALL	IC0 IC-U400	16 ch 35w UHF keybrd mobile.m	499 ⁹⁵
MMB-32A	Mobile hanger; not FT-470 ..Dmwfv	14.00	\$25 coupon - G-5400B thru 5/20/95				IC0 IC-W2A	2m/440 FM HT/TTP	439 ⁹⁵
MMB-46	Mobile hanger for FT-470	15.00	Sep Kit	Separation kit for G-5400B	30.00		IC0 IC-W21AT	2m/440 HT/TTP/spkr/mic mwfv	418 ⁹⁵
MMB-54	Mobile mtg bracket	26.00	GC-038	Mast clamp; 400/800/1000/5400B ...	30.00		IC0 IC-126AT	1.2 GHz FM HT/TTP	369 ⁹⁵
NC-18B	Wall charger for FNB-12S	16.00	GC-048	Mast clamp; G-2700/2800SDX	45.00		IC0 IC-4iA	440 FM HT	209 ⁹⁵
NC-28B	Extra wall charger for FNB-9/10/17 ..	16.00	GS-050	50mm thrust bearing; mast 1 1/4-2" ...	35.00		IC0 IC-45RA	440 FM HT/25-905 Rcvr	369 ⁹⁵
NC-29	Desk quick cgr; FNB-12S/14/17	77.00	GS-065	65mm thrust bearing; mast 1 1/4-2 1/2" .	52.00		IC0 IC-575H	100w 6/10m FM/SSB Xcvr mwfv	1649
NC-34B	Wall charger for FNB-14	15.00	GS-23	Interface; G-800/1000/2700SDX	345.00	299 ⁹⁵	IC0 IC-735	HF Xcvr	1199
NC-37	1-hour desk cgr; FNB-12S/14/17	125.00	GS-232	Interface for G-5400B	547.00	469 ⁹⁵	IC0 IC-737A	HF Xcvr/keyer/auto tuner ..mwfcv	1299
PA-6	Mobile DC adapter/cgr; FNB-9/10/14/17 .	30.00	See BELDEN for rotor cable				IC0 IC-765	HF Xcvr/ps/keyer/auto tuner mwfv	2999
PA-7	Battery extension cable	33.00	ZENITH (ZEN)				IC0 IC-970H	45w 2m/430 Xcvr w/ps	2999
YH-2	Lightweight VOX headset w/mic	35.00	A-8477	75 ohm high-pass filter	Dmwfcv	9 ⁹⁵	IC0 M-2	5w VHF marine HT	319 ⁹⁵
FT-11R	1.5w 2m FM HT/FNB-31/cgr/TTP	389.00	zm Xpressions (ZMX)				IC0 M-5	5w VHF marine HT	359 ⁹⁵
FT-11R/HP	5w 2m FM HT/FNB-38/cgr/TTP	399.00	What is your TNC doing? Book			\$ 15.00	IC0 PS-30	20A systems power supply	359 ⁹⁵
\$30 coupon - FT-11R/FT-11R/HP thru 5/20/95			CLOSE-OUTS				IC0 RP-4020	25w 440 FM repeater	1899
FT-41R	1.5w 440 FM HT/batt/cgr/TTP	479.00	AEA ARE-20	Digital voice counter	mv	169 ⁹⁵	IC0 TV-970	1.2GHz ATV adapter; 970	369 ⁹⁵
FT-51R	2w 2m/440 FM HT/FNB-31/cgr/TTP ...	609.00	AEA AVT	Master video system; Amiga	mwfv	199 ⁹⁵	IC0 UX-S92A	2m SSB module; IC-901	229 ⁹⁵
FT-51R/HP	5w 2m/440 FM HT/FNB-38/cgr/TTP ..	629.00	B&K 541	Component comparator	m	309 ⁹⁵	IC0 UX-39A	220 unit for IC-901	229 ⁹⁵
\$20 coupon - FT-51R/FT-51R/HP thru 5/20/95			B&K 1630	0-30V, 0-3A power supply	m	219 ⁹⁵	IC0 UX-R96	Extended receive unit; 970	399 ⁹⁵
51R	Clone cable; FT-11R/41R/51R	9.00	B&K 1646	0-16V, 0-10A power supply	m	369 ⁹⁵	JRC CFL-232	500 Hz crystal filter	99 ⁹⁵
CA-10	2 charging sleeves; NC-50/11/41/51R ..	18.00	B&K 3011B	2 MHz function generator	m	199 ⁹⁵	JRC NBD-520	DC ps for JST-135	269 ⁹⁵
CD-2	Mobile rapid charger; FT-11/41/51R ..	99.00	B&K 3022	Sweep/func generator w/freq ctr m		369 ⁹⁵	JRC NFG-230	Automatic antenna tuner	489 ⁹⁵
CSC-61	Case; 11R/41R/FNB-33/38/FBA-14 ..	22.00	BLT 966STW	3-band wideband Ka detector m		179 ⁹⁵	KAN KPC-2	Packet controller	159 ⁹⁵
CSC-62	Soft case for FT-11R/41R/FNB-31 ..	22.00	BLT 966W	3-band wideband Ka detector	m	139 ⁹⁵	KEN TL-922A	2kw PEP amplifier	1869
CSC-66	Soft case; FT-51R/FNB-33/38/FBA-14 ..	22.00	CMT 5D-FB	100m 1/4" coax	m	99 ⁹⁵	MFJ 1274CT	Turbo controller w/2400	149 ⁹⁵
CSC-67	Soft case for FT-51R/FNB-31	22.00	CMT 10D-FB	100m 1/2" coax	m	249 ⁹⁵	MFJ 1278T	Turbo controller w/2400	249 ⁹⁵
FBA-14	AA battery holder	23.00	CMT CD-160H	1.6-60MHz 2kw SWR/power	m	119 ⁹⁵	MFJ 2040	Repeater controller	249 ⁹⁵
FNB-31	600ma 4.8v battery	57.00	CMT CD-270	140-525MHz 200w SWR/pwr	m	99 ⁹⁵	MOT H-5111	5w VHF marine HT	299 ⁹⁵
FNB-33	1200ma 4.8v battery	83.00	CMT CX-902	2m/440/1.2 base ant	mwv	119 ⁹⁵	NYE MBIV-A1	3kw antenna tuner	479 ⁹⁵
FNB-38	600ma 9.6v (5w) battery	83.00	COB CP-910	900 MHz cordless phone	f	199 ⁹⁵	NYE 047-001	4-pin phone patch	99 ⁹⁵
FTS-26	CTCSS decoder	59.00	COB RD-3170	Superhet radar detector	m	69 ⁹⁵	PAL M-835	HF automatic meter	159 ⁹⁵
MH-12A2B	Speaker/microphone	50.00	COB RD-4120	Superhet radar detector	m	39 ⁹⁵	PAL P-405	9V HF receiver preamp	99 ⁹⁵
MH-19A2B	Earpiece/microphone	46.00	COB RDL-412	Radar/laser detector	mwf	99 ⁹⁵	PAL P-408	AC HF receiver preamp	119 ⁹⁵
MH-29A2B	LCD display spkr/mic; 51R	109.00	COU PROCOM	2w VHF FM HT	mwf	139 ⁹⁵	PAN RF-B65	Shortwave receiver	179 ⁹⁵
MH-32A2B	Compact lapel speaker/mic	40.00	COU U-22	UHF HT - specify channel	mf	149 ⁹⁵	RAN RCI-7000	5w mVHF marine HT	149 ⁹⁵
NC-34B	Wall charger for FNB-33	15.00	CUS 220-QK	Stack kit; 4 220B	f	99 ⁹⁵	SAN ATS-803A	AM/FM/SW port Rcvr	169 ⁹⁵
NC-38B	Wall charger for FNB-38	16.00	CUS 324-QK	Stack kit; 4 32-19	v	129 ⁹⁵	SAN ATS-808	AM/FM/SW port Rcvr	159 ⁹⁵
NC-55B	Wall charger for FNB-31	15.00	CUS A144-20T	2m 20 el 12db twist beam	wv	99 ⁹⁵	SON ICF-SW800	AM/FM/SW/prog cards	59 ⁹⁵
NC-50	1-hour dual slot charger	109.00	CUS PS-4	Remote polarity switch	mwfv	99 ⁹⁵	STA C-158A	2m FM HT/TTP	209 ⁹⁵
PA-10A	Mobile drop-in adapter/cgr	66.00	DIA CP-4A	40/20/15/10m vertical ant	mw	149 ⁹⁵	STA C-5608DA	2m/440 FM Xcvr/TTP	699 ⁹⁵
VC-22	Headset w/VOX	59.00	DIA CP-6	80/40/20/15/10/6m vert ant	w	199 ⁹⁵	UNI BC-2500XLT	25-1300MHz pocket	349 ⁹⁵
ANTENNA ROTORS			DIA SX-9000	HF/VHF/UHF automatic meter ...f		249 ⁹⁵	UNI BCT-2	Preprog mobile scanner	139 ⁹⁵
G-450XL	10 sq ft antenna rotor	\$269.00	DRA R-8	Shortwave receiver	mwv	979 ⁹⁵	YAE 2M/767	2m module for FT-767GX	249 ⁹⁵
\$25 coupon - G-450XL thru 5/20/95			GRU Cosmopolit	Port AM/FM/SW Rcvr	mwv	159 ⁹⁵	YAE 430/767	430 module for FT-767GX	319 ⁹⁵
G-500A	12 sq ft elevation rotor/8-wire	319.00	GRU Yacht Boy 206	Port AM/FM/SW Rcvrmwfv		99 ⁹⁵	YAE DVS-1	Dig voice memory module	19 ⁹⁵
\$25 coupon - G-500A thru 5/20/95			GRU Yacht Boy 230	Port AM/FM/SW Rcvr	m	99 ⁹⁵	YAE FT-76/25	440 FM HT	249 ⁹⁵
G-800S	Med/hvy duty 450 degree 17sq ft/5-wire	379.00	GRU Yacht Boy 235	Port AM/FM/SW Rcvrmwfv		99 ⁹⁵	YAE FT-811	440 FM HT/TTP	234 ⁹⁵
\$25 coupon - G-800S thru 5/20/95			HYG 610-1	600 ohm headphones	mwfv	99 ⁹⁵	YAE FT-815	440 FM HT/TTP	299 ⁹⁵
G-800SDX	Med/hvy duty 17sq ft/presets/5-wire	483.00	ICO A-2	5w PEP aircraft HT	mwfv	449 ⁹⁵	YAE FT-816	440 FM HT/TTP	299 ⁹⁵
\$25 coupon - G-800SDX thru 5/20/95			ICO A-21	5w PEP Navicom Plus air HT	mwv	499 ⁹⁵	YAE FT-890/AT	HF Xcvr/tuner w/coupon,mwfv	1249
G-1000SDX	HD 450 degree 23sq ft/presets/5-wire	589.00	ICO IC-P4AT	440 FM HT/TTP	w/coupon,mwfv	219 ⁹⁵	YAE MW-1	Wireless remote mic	99 ⁹⁵
\$25 coupon - G-1000SDX thru 5/20/95			ICO IC-U18	16 ch 5w UHF FM prog HT	m	329 ⁹⁵	YAE XF-455K-251-01	250Hz CW filter	159 ⁹⁵
G-2800SDX	HD 450 degree 34sq ft/presets/8-wire	1329.00					YAE YF-100	500 Hz CW filter	119 ⁹⁵
\$25 coupon - G-2800SDX thru 5/20/95							ZEN A-8477	75 ohm high-pass filter	9 ⁹⁵

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CP-711 Cellular style/selectable ch	Dmf	129.95	49 ⁹⁵
CP-910 900MHz 100ch dig spread spec	Df	399.95	199 ⁹⁵
CP-706 Ivory cordless phone w/scrambler		129.95	89 ⁹⁵
CP-912 900MHz 100ch dig spread spectrum		369.95	269 ⁹⁵
TELEPHONE ANSWERING MACHINE			
AN-8566 Ans machine w/9# mem ph	Dmw	\$129.95	49 ⁹⁵

SCANNERS & MONITORS

Antenna Specialists (ASP)

MONR1 H or U low profile roof mt monitor ant .		\$23.50	
MON-9 H & U magnet mt monitor antenna		35.25	
MONR31 L/H/U gain ground plane base ant ..		55.25	

BMI (BMI)

Nitelogger Automatic recorder activator		\$69.95	
RC-1A Impedance matching patch cord		19.95	

CHANNEL MASTER (CHA)

5094A 4-band base Monitenna ant w/50' coax .		\$47.69	39 ⁹⁵
5095A Kit w/5094A ant, 5' tri-mast, 50' coax		59.39	49 ⁹⁵

COBRA (COB)

SR-11 10 ch prog pocket scanner	Dmf	\$219.95	79 ⁹⁵
20-1E Eastern U.S. frequency book	Dmf	14.95	5 ⁹⁵

GROTHE (GRO)

VS-2 Emergency vehicle siren		\$99.00	89 ⁹⁵
VS-2L/A Window mt siren/amber light		249.00	
VS-2L/B Window mt siren/blue light		249.00	
VS-2L/R Window mt siren/red light		249.00	
VS-2LS/A Window mt siren/amber strobe		299.00	
VS-2LS/B Window mt siren/blue strobe		299.00	
VS-2LS/R Window mt siren/red strobe		299.00	
VS-3 Volunteer vehicle PA/horn w/spkr		159.00	129 ⁹⁵
VS-4 P/A emergency vehicle siren w/spkr		169.00	139 ⁹⁵

JBRO (JAB)

JB-1000 Battery; Regency HX-1000/1200	Δf	\$30.00	24 ⁹⁵
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MAXON (MAX)

WX-70 Weather monitor w/alert		\$59.95	49 ⁹⁵
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Monitor America (MON)

Monitor America Scanner frequency book		\$24.95	
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OFFICIAL (OFF)

Aeronautical Frequency Directory	m	\$24.95	
Maritime Frequency Directory	m	24.95	

UNIDEN BEARCAT (UNI)

BCT-2 Pre-prog warning scan/AC ps ...	Dmwf	\$239.50	139 ⁹⁵
BC-147XLT-1 16 ch prog scanner/instant WX ..		169.95	99 ⁹⁵
BC-148XLT-1 16 ch prog scanner/WX alert		179.95	99 ⁹⁵
BC-178XLT 100 ch prog scan/air/WX alert		249.95	149 ⁹⁵
BC-350A 50 ch prog/service search w/AC ps .		199.95	119 ⁹⁵
BC-560XLA 16 ch prog scanner w/AC ps		169.95	99 ⁹⁵
BCT-7 Pre-prog warning scan/air/800/AC ps .		319.95	199 ⁹⁵
BC-700A 50 ch prog/svc search/800/AC ps ...		299.95	179 ⁹⁵
BC-760XLT 100 ch prog/svc search/800/AC ps		369.95	229 ⁹⁵
BC-002 CTCSS tone board; BC-760XLT		51.89	
BC-003 Switch box for BC-002		10.70	
BC-004 RF preamp for BC-760XLT		27.80	
BC-860XLT 100 ch prog scanner/air/800		319.95	199 ⁹⁵
BC-890XLT 200 ch 956 MHz scanner/WX alert		439.99	269 ⁹⁵
BC-002 CTCSS tone board; BC-890XLT		51.89	
BC-9000XLT 500 ch 25MHz-1.3GHz		769.95	429 ⁹⁵
BC-005 CTCSS tone board; 8500/9000XLT .		37.89	
BC-55XLT 10 ch prog pocket scanner	Dfv	179.95	79 ⁹⁵
BC-60XLT 10 ch prog pocket scanner		169.95	99 ⁹⁵
AD-100 AC adapter/batt cgr		16.89	
PS-001 DC power cord		8.89	
BC-80XLT 50 ch prog pocket scanner/800		309.95	189 ⁹⁵
BP-70 Extra battery for BC-70XLT	Δmv	27.80	

UNIDEN - continued

	Reg	Sale
AD-140 Extra charger; BC-100XLT/200XLT		13.29
BP-200 Extra battery; BC-200XLT		32.82
BP-205 Extra battery; BC-100XLT		37.23
VC-001 Carrying case; BC-55XLT	Δmwf	8.89 6 ⁹⁵
BC-120XLT 100 ch prog pocket w/aircraft		249.95 149 ⁹⁵
BC-220XLT 200 ch prog pocket w/800 MHz ...		439.95 259 ⁹⁵
SC-150B 100 ch black sport pocket/800		329.95 189 ⁹⁵
AD-70 Extra charger		13.49
BP-120 Extra battery		18.29
LC-120 Carrying case for BC-120/220XLT ..		19.59
LC-150B Carrying case for SC-150B		19.59
Diamond RH-77CA 15" rubber gain ant		34.95 32 ⁹⁵
UA-502 Cig power cord		12.19
BC-2500XLT 400ch poc/25MHz-1.3GHz Dmwf		669.95 349 ⁹⁵
BC-3000XLT 400 ch 25MHz-1.3GHz pocket ...		699.95 399 ⁹⁵
BP-2500 Extra batt; BC-2500/3000XLT		32.49
FB-E Eastern U.S. frequency book	Dm	14.95 6 ⁹⁵
NPD-001 National frequency book		14.95
RFD-001 IN/L/KY/OH/MI/WI freq book		14.95

RADAR DETECTORS

BEL (BLT)

956W 3-band wideband Ka detector	Dm	\$299.95 79 ⁹⁵
966STW 3-band wideband Ka detector	Dm	459.95 179 ⁹⁵
966W 3-band wideband Ka detector	Dm	379.95 139 ⁹⁵
LA-132 Laser detector	Δm	129.95 39 ⁹⁵

COBRA (COB)

LD-200 Laser detector	Dmw	\$79.95 49 ⁹⁵
RD-302 3-band wide band detector	Dmwf	129.95 49 ⁹⁵
RD-306 3-band wide band detector	Df	189.95 89 ⁹⁵
RD-3170 Deluxe superhet detector	Dm	299.95 99 ⁹⁵
RD-4120 Super heterodyne detector	Dm	209.95 39 ⁹⁵
RD-6000 Solar powered radar detector	Dmw	319.95 79 ⁹⁵
RDL-412 Radar/laser detector	Dmwf	199.95 99 ⁹⁵
RDL-512 Radar/laser detector		159.95 129 ⁹⁵

LAND MOBILE

COURIER (COU)

Procom* 2w VHF FM hand-held/batt/cgr Δmwf		\$199.95 139 ⁹⁵
ANT-2 Extra BNC flexible antenna	Δmw	12.00 9 ⁹⁵
AUC-12 Cig lighter charger adapter	Δmwf	12.00 9 ⁹⁵
CHB-7 Extra AC battery charger	Δm	6.50 5 ⁹⁵
RB-7 Extra nicad battery pack	Δmw	32.00 29 ⁹⁵
RSM-1 Speaker/mic	Δmf	37.50 32 ⁹⁵

*Available in one of three frequencies:

Frequency A (red) - 151.625 MHz (itinerant)

Frequency B (blue) - 154.570 MHz

Frequency C (green) - 154.600 MHz

M-54 5w 4ch VHF FM hand-held/batt/cgr/151.625		299.95 199 ⁹⁵
M-510 5w 10ch synth VHF FM hand-held		399.95 269 ⁹⁵
CCK-510 Cloning cable for M-510		14.00
U-22* 2w 2ch UHF FM hand-held/batt/cgr Dmf		279.95 149 ⁹⁵

*Available in one of five frequencies:

Frequency A (white) - 462.575 MHz

Frequency B (black) - 462.625 MHz

Frequency C (orange) - 462.675 MHz (REACT)

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Frequency E (yellow) - 464.550 MHz (business radio svc)

ICOM (ICO)

IC-U18 16ch 5w UHF HT; 450-460 or 460-470 ..	Dm	\$849.00 329 ⁹⁵
UT-14 Tone unit	Dm	115.00 24 ⁹⁵
IC-U400 16 ch 35w UHF keyboard mobile Dm		882.00 499 ⁹⁵
A-2 5w PEP synth aircraft handheld ...	Dmwf	629.00 449 ⁹⁵
A-21 5w PEP Navicom Plus air handheld Dmwf		730.00 499 ⁹⁵
A-22 5w PEP compact Navicom air handheld		720.00 549 ⁹⁵

MAXON (MAX)

MX-49FX 5 ch 49 MHz ear mic Xcvr		\$89.95 59 ⁹⁵
MX-49HX 5 ch 49 MHz euro-design headset Xcvr		89.95 49 ⁹⁵
MX-49HXX Intercom headset; MX-49HX Δm		29.95 19 ⁹⁵
MX-49SX* 49 MHz euro-design headset Xcvr		59.95 29 ⁹⁵

*Available in channels A, B, & E; limited qty's in channel D

MAXON - continued

	Reg	Sale
PC-10* 49 MHz hand-held/PTT/VOX headset		59.95 39 ⁹⁵
*Available in channels A, B, & E		
PC-50 5ch 49MHz hand-held/PTT/VOX headset		89.95 59 ⁹⁵

RANGER (RAN)

RCI-1000* 1w 2ch VHF FM hand-held/batt/cgr		\$199.00 139 ⁹⁵
BT-10 Extra nicad batteries		29.95 24 ⁹⁵
DG-10 Desk charging stand (use wall cgr) .		14.95
LC-1000 Leather case		24.95 19 ⁹⁵
MT-17 CTCSS encoder/decoder		54.95 49 ⁹⁵
SRA-106A Speaker/mic		44.95 39 ⁹⁵

*Available in one of two frequency combinations:

A (red) - 151.625 & 154.570 MHz

C (green) - 154.600 & 154.570 MHz

MARINE VHF FM RADIO

ICOM (ICO)

M-2 5w synthesized marine hand-held .	Dmwf	\$659.00 319 ⁹⁵
M-5 5w synth hand-held w/9 mem	Dmwf	725.00 359 ⁹⁵
CA-1 Extra flexible antenna	Δm	20.00

MOTOROLA (MOT)

HSN9690 Hailer speaker; H5058R/5059R Δm		40.00 29 ⁹⁵
H5111 5w VHF marine hand-held	Δf	639.00 299 ⁹⁵

RANGER (RAN)

RCI-6060 25w VHF marine Xcvr w/scan		\$279.00 169 ⁹⁵
RCI-7000 5w 88 ch VHF marine hand-held Dmf		289.95 149 ⁹⁵
RCI-9000 5w 90 ch VHF marine hand-held ...		299.00 189 ⁹⁵

UNIDEN (UNI)

MC-635 25w 90 ch VHF marine Xcvr w/scan .		\$309.99 149 ⁹⁵
MC-795 25w 90 ch VHF marine Xcvr w/prog ..		405.99 179 ⁹⁵
HH-978XL 5w 90 ch VHF marine hand-held ...		279.99 139 ⁹⁵
HH-979 5w 90 ch marine hand-held/scan		349.99 159 ⁹⁵

SHAKESPEARE (SHA)

399-1 6 db, 9' 6" 2-piece ant, less mt	Δw	\$182.95 69 ⁹⁵
497 6 db, 8' antenna, less mount		81.95 49 ⁹⁵
5202 6 db ant w/chrome ferrule, less mt		123.95 69 ⁹⁵
5206-C Economy 8' ant w/chrome ferrule, no mt .		55.95 39 ⁹⁵
366H Chrome zamac ratchet mount		38.95 24 ⁹⁵
495 White plastic lift & lay mount		19.95 14 ⁹⁵
420 3 db, 5' ant w/fold-down mount		89.95 49 ⁹⁵
420-M-2 3 db, 5' mast mount antenna Δmwf		107.95 39 ⁹⁵
5204-8 Combo CB/VHF marine 8' antenna		179.95 89 ⁹⁵

On major products ask your salesperson about...

- Late Breaking "Hot Deals"
- Latest Sale Prices
- Monthly specials
- Coupons, etc.

Info also available on the AES® BBS

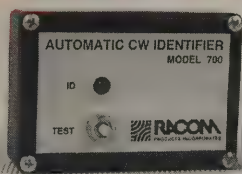
1-414-358-3472

Internet E-Mail Address:

aesham@execpc.com



RACON PRODUCTS INCORPORATED

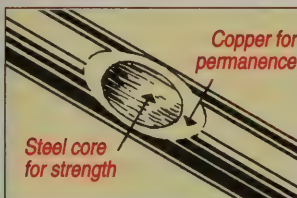


Automatic CW Station Identifier

Applications in: Ham Radio • Business Radio (mobiles or base station) • Public Safety or local government • Local or remote controlled stations and repeaters • Paging operations • Marine

► **Model 700** Automatically, reliably identifies your radio transmitter call sign at CW speeds programmable from 10 to 40 wpm. Removable and re-programmable EEPROM. Program call signs (up to 50 characters) by a cable to a PC or at the factory. Four distinct programmable operating modes comply with all FCC regulations concerning identification. Offers standard pulsed tone ID or toneless CW for pulsed carrier ID. Includes programmable (0-98 minutes) interval timer, monitor delay, code speed and tone frequency. Two activity monitors and two timers inhibit identification when station is in use. Requires 9-16 VDC/VAC @ 100 mA. 2 1/4" w x 2" h x 1 1/4" d, 3 oz. **\$92⁰⁰**
► **700-PC** PC Programming cable and software for changing Call Letters and Parameters **\$30⁰⁰**

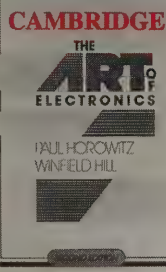
CROWN METAL COPPERWELD® Antenna Wire FORGE-WELDED makes the two metals inseparable!



Solid bare copper-over-steel wire - The best for antennas!
Very strong, steel core has very little stretch and long service life. Copper covering provides low RF resistance, easy to solder.

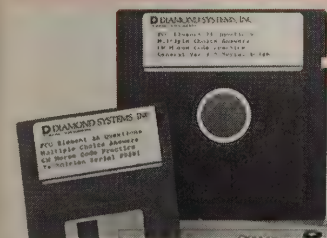
Choice of 12, 14 or 18 gauge, 100, 150, 250, 500 or 1000 ft. rolls.
AN-122 100 ft. #12 **\$24⁹⁵** AN-143 150 ft. #14 **\$24⁹⁵**
AN-123 150 ft. #12 **\$29⁹⁵** AN-144 250 ft. #14 **\$29⁹⁵**
AN-124 250 ft. #12 **\$49⁹⁵** AN-146 500 ft. #14 **\$54⁹⁵**
AN-126 500 ft. #12 **\$79⁹⁵** AN-148 1000 ft. #14 **\$89⁹⁵**
AN-128 1000 ft. #12 **\$129⁹⁵** AN-181 250 ft. #18 **\$14⁹⁵**
AN-142 100 ft. #14 **\$19⁹⁵** AN-182 500 ft. #18 **\$24⁹⁵**

► **The ART of Electronics** A single authoritative text and reference on electronic analog and digital circuit design. Emphasizes methods actually used by circuit designers—a combination of some basic laws, rules of thumb, and a large bag of tricks. The largely non-mathematical treatment encourages circuit intuition, brain storming, & simplified calculations of circuit values and performance. 7" x 10" - 1120 pages. **\$59⁹⁵**



DIAMOND Systems

**Amateur Radio
License Study
Courses for IBM
PC/XT/AT and
"look-alikes" using
PC/MS DOS**



It's Easy! . . . all the LATEST study material needed for the FCC Exam • Theory, Code, and Regulations - included.
Prep material for Amateur Licenses Novice through Extra class and No-Code Technician! Software includes complete FCC VEC questions, all sub elements, generates 1000's of practice tests, keeps score, plus a code teaching program.

DS-IBM-N Novice class **\$39⁹⁵** DS-IBM-G General class **\$34⁹⁵**
DS-IBM-T Technician class **\$34⁹⁵** DS-IBM-A Advanced class **\$49⁹⁵**
DS-IBM-NC No Code Tech **\$49⁹⁵** DS-IBM-E Extra class **\$49⁹⁵**



GROTHE Sirens & Horns

► **Model VS-2 Emergency Vehicle Siren** Designed for the volunteer fireman, a quality built wail-yelp alarm that delivers big sound performance - a whopping 120Db sound level at 4 ft. Frequency range, 600 to 1200Hz. Pre-wired with a 3-position switch (Yelp-Off-Wail), high efficiency waterproof horn speaker (5" x 7" x 9"), 10 ft. cable, mounting bracket/hardware. 12VDC @ 1.5 amps. 2.7 lbs. **\$89⁹⁵**



► **Model VS-3 Vehicle P/A & AirHorn with Rebroadcast** Powerful airhorn sound with four different sounds really calls attention to your vehicle. No siren. Delivers 95 watts output - 120 Db at 4 ft. Rebroadcast feature allows sound from mobile rig, scanner or car radio to be rebroadcast and monitored through the speaker outside. Includes speaker (5" x 7" x 9"), microphone, electronic center (3" x 3 1/2" x 2"), 10 ft. cable, mounting bracket and hardware. 12 VDC @ 1.5 amps **\$129⁹⁵**



► **Model VS-4 P/A Emergency Vehicle Siren** Contains P/A, Rebroadcast, Wail, Yelp, Pulse, Airhorn and P/A Override features, plus volume control of all siren modes. Restricts output when operating in people places. Includes speaker (5" x 7" x 9"), microphone, electronic center (3" x 3 1/2" x 2"), 10 ft. cable, mounting bracket and hardware. 12V DC @ 1.5 amps **\$139⁹⁵**

► **Siren-Light Combo** Consists of a quality built siren/yelp alarm, revolving halogen or strobe light and rubberized window mount in one unit. Requires no installation and fits all cars. Just slide on top of the car window and plug into cigarette lighter outlet. The power plug contains an "on" LED and three position switch to select yelp, off or wail modes. 12 VDC @ 5 amps.



Halogen specify amber, blue or red **VS-2L \$249⁰⁰**
Strobe specify amber, blue or red **VS-2LS \$299⁰⁰**

ALPHA NEONX Neon Signs



Proudly Display your Call Sign in Neon!

Manufactured exclusively for AES®, these blazing Neon Displays are sensational! Compact, solid state high voltage supply. All connections are sealed for protection and automatic shut off in case of breakage, open or short circuit.

► **Two-line model (left)** Displays CALL SIGN and ON-AIR. Instead of ON-AIR you may substitute a name, or anything else up to nine characters Choice of Red, Blue, Gold or White neon colors for each line. Mounted on an attractive smoke-black 18" w x 12" h x 2 1/4" d acrylic panel with chain **\$249⁹⁵**

► **Single-line model (right)** smoke black acrylic panel measures 18" w x 12" h x 2 1/4" d. Display your choice of CALL SIGN, NAME, or anything else, up to nine characters, in brilliant Red, Blue, Gold or White neon colors. **\$199⁹⁵**

Special Order - Allow two-weeks for delivery

Due to the speciality nature of this item, all sales are final with no returns. Orders must be accompanied by a check or money order. No credit cards or COD orders accepted.



► **COYNE MacHam™** Upgrade your Amateur Radio License on your Apple Macintosh. 3 1/2" disks contain all FCC test questions and diagrams with scoring on screen or printed. Prints complete FCC-style exams. Requires 2Mb RAM, Hard disk, System 6.05, .07 or 7.0 and Hypercard 2.x. When ordering, specify for **General, Advanced or Extra class \$34⁹⁵**

KENWOOD Accessories

► **HS-5 Headphones** High quality, specifically designed for use with communications systems. They provide a natural sound and eliminate any uncomfortable pressure feeling, permitting long hours of fatigue-free listening. Nominal impedance is 8Ω, frequency response is 150Hz to 4kHz. A 78" cord has a standard 1/4" phone plug attached. 12 oz **\$79⁹⁵**



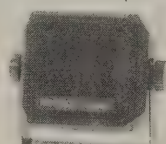
► **PC-1A Phone Patch Controller** Interfaces a transceiver with your telephone line. Isolates receiver and transmitter to provide phone patching capability. Comes with an 8-pin plug wired for KENWOOD transceivers, but may be used with most other equipment with changes in connections. Features NULL control, receiver and transmitter gain controls and VU level meter for setting levels. 5 1/2" w x 2 1/4" h x 5" d, 1 1/4 lbs **\$124⁹⁵**



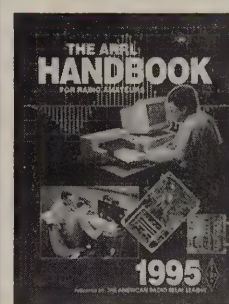
► **LF-30A HF Low Pass Filter** Reduces the possibility of television and broadcast interference by suppressing harmonics contained in RF signals from 1.9 to 28MHz transmitters. The cut-off frequency is 30MHz, and the attenuation is greater than 90dB from 90 to 300MHz. 50-239 connectors (52Ω), rated at 1000W PEP (SSB). 9 1/2" x 2" x 1 1/4", 1.2 lbs **\$59⁹⁵**



► **SP-41 Compact Mobile Speaker** Contains a 2 1/4" - 5 watt rated speaker with a 4Ω, nominal impedance and 600Hz to 4 kHz frequency response. Includes a 75" cord with 3.5mm plug and mounting bracket. 3 3/8" w x 3" h x 2 1/8" d, 1/2 lb **\$48⁹⁵**



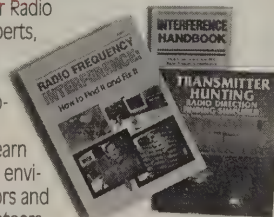
► **SP-50B Quality Mobile Speaker** Contains a 3" - 2.5 watt rated-speaker with an 8Ω nominal impedance and a 300Hz to 4 kHz frequency response. Includes a 102" cord with 3.5mm plug installed and mounting bracket. 5" w x 3 3/8" h x 1 1/8" d, 0.6 lbs **\$52⁹⁵**



► **1995 ARRL HANDBOOK** The 71st Edition! A guide to radio theory that every ham should know, including the latest digital modes and hundreds of explanatory and practical circuits. A gold mine of construction projects that will allow all hams—beginners, old-timers and everyone in between to build amateur gear for their stations. A reference guide with updated parts lists and equipment suppliers and

solid-state component data, transmitting tubes... **ARR101 \$30⁰⁰**

► **RADIO INTERFERENCE: How to Find it and Fix it** A new approach to an Old Amateur Radio problem. Written by RFI experts, it's filled with proven ways to solve common—and not so common RFI or EMI problems, whatever their cause may be. In addition, you'll learn how to build a co-operative environment with your neighbors and how to contact skilled volunteers who can assist you with those tricky situations **ARR 260 \$15⁰⁰**

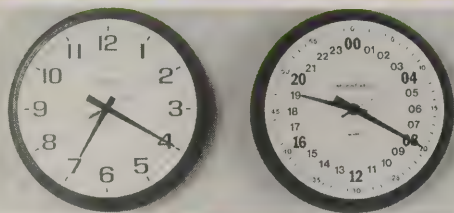


► **TRANSMITTER HUNTING: Radio Direction Finding** All of the information you need about equipment and techniques for HF and VHF radio direction finding. Transmitter hunting is both practical and fun. Using the information in this book you can also locate jammers and other sources of radio signals and malicious interference that is causing problems **ARR 320 \$19⁰⁰**

More ARRL Books! — See the Price List

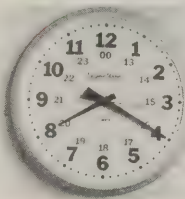
► **INTERFERENCE HANDBOOK** Locate and resolve all types of interference problems. Describes interference sources and the methods used to locate them. Discusses suppression circuits for interfering devices and protection techniques for home entertainment equipment. **RAC 087093 \$11⁹⁵**

CLOCKS FOR THE HAMSHACK



BMI

- **972A (left)** • Battery operated 12-hour time quartz controlled clock with 12" dial and sweep second hand. Black textured case and clear glass crystal. Uses 1 (size AA) battery. 14" dia. x 13/4" d. Looks good in shack! **\$37⁹⁵**
- **973A (right)** • 24-hour version **\$49⁹⁵**



► Model 972AD

14" diameter
12/24 hour format
wall clock **\$39⁹⁵**

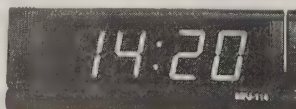
MFJ

- **105B 24 Hour Quartz Wall Clock**
Handsome black, 10" diameter face, sweep second hand. Uses single "A" battery, not included! **\$19⁹⁵**



- **112 Dx'ers World Map Clock and Calendar** Latest electronic and display technology shows a World Map with 25 major world cities selectable by pushbutton. 12-hour time format with alarm feature.

Large 1/2" LCD readout shows: Time, Month and Day in 24 different world time zones. Includes handy tilt bracket and long life lithium battery. 5 1/2" w x 3 1/4" h x 3/8" d **\$24⁹⁵**



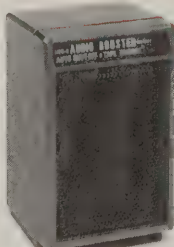
- **114 Giant LED 24/12-hour clock.** Four 2.3" digits. User selectable 12 or 24-hour display format. 110VAC with battery back-up. 6 1/2" h x 13" w x 1" d **\$39⁹⁵**



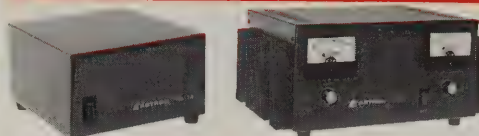
- **Small 24-hour Clocks Two models** – a Dual Clock with separate UTC and local time displays, and a Single Clock with 24 hour time only. Heavy brushed aluminum frame, 5/8" high LCD numerals, sloped face. Flashing seconds colon, battery included.
- **107B Single Clock,** 2 1/2" w x 1" h x 2" d **\$ 9⁹⁵**
- **108B Dual Clock,** 4 1/4" w x 1" h x 2" d **19⁹⁵**

NAVAL

- **HTS-3 Audio Booster Speaker**
Improves audio output from HT's, Walkman, and others. Has 10dB audio amplifier and quality 3 1/2" speaker. Requires (4) AA batteries; alkaline or nicads, or 5-15VDC. Has built-in NiCad charger. Comes with 5 ft. audio cord with plug and stereo to monaural converter. 2 1/4" w x 4 1/2" h x 2 1/2" d, 1 lb. **\$34⁹⁵**



ASTRON Power Supplies



The alternative to more costly "matching" power supplies

► **Features:** 105-125V AC input, 13.8V DC output; internally adjustable from 11-15V • Electronic regulation with fold-back current limiting and crowbar overvoltage protection • Heavy-duty heat sink • 3-wire cord • One-year warranty • Made in U.S.A. Separate voltage and ampere meters on RS-20M, 35M, 50M and 70M. Separate voltage and ampere meters, plus voltage adjustment (2-15V DC) on VS-20M, VS-35M and VS-50M. Models RM-35M, RM-50M and RM-60M are rack mount.

Astron Model	Cont. Amps	ICS Amps	Size (in.) h w d	Ship. wt.	Regular Price	AES Price
RS-7A	5	7	3 1/4 x 6 1/2 x 9	9	\$68.95	\$59⁹⁵
RS-10A	7 1/2	10	4 x 7 1/2 x 10 1/2	11	85.95	69⁹⁵
RS-12A	9	12	4 1/4 x 8 x 10 1/2	13	99.95	79⁹⁵
RS-20A	16	20	5 x 9 x 10 1/2	18	121.95	99⁹⁵
RS-35A	25	35	5 x 11 x 11	27	197.95	149⁹⁵
RS-50A	37	50	6 x 13 1/2 x 11	46	285.95	219⁹⁵
RS-70A	57	70	6 x 13 1/2 x 12	48	339.95	259⁹⁵
with separate volt/amp meters						
RS-20M	16	20	5 x 9 x 10 1/2	18	144.95	119⁹⁵
RS-35M	25	35	5 x 11 x 11	27	204.95	169⁹⁵
RS-50M	37	50	6 x 13 1/2 x 11	46	314.95	239⁹⁵
RS-70M	57	70	6 x 13 1/2 x 12	48	372.95	289⁹⁵
with variable output & separate volt/amp meters						
VS-20M	16	20	5 x 9 x 10 1/2	20	170.95	139⁹⁵
VS-35M	25	35	5 x 11 x 11	29	238.95	189⁹⁵
VS-50M	37	50	6 x 13 1/2 x 11	46	330.95	259⁹⁵
Rack mount models – separate volt/amp meters						
RM-35M	25	35	5 1/4 x 19 x 12	38	318.95	249⁹⁵
RM-50M	37	50	5 1/4 x 19 x 12	50	354.95	279⁹⁵
RM-60M	50	55	7 x 19 x 12	60	467.95	359⁹⁵

- **ASTRON RS-4L** Power supply with built-in cigarette lighter receptacle on the front panel. 13V DC @ 4 Amps peak, 3 Amps continuous. 3 1/2" h x 6 1/2" w x 4 1/4" d, 6 lbs. **\$49⁹⁵**

- **ASTRON RS-12S** Power supply with built-in speaker. Rated 13VDC @ 12A pk., 9A cont. 4 1/2" h x 8" w x 9" d, 13 lbs. **\$89⁹⁵**

ASTRON Solid-state Power Inverters

General Purpose

- **12/115** Converts 12V DC to 115VAC @ 60 Hz output. Provides convenient AC house current in your Boat, Car, Truck, Camper, etc. Powers your ham rig, small household appliances, TV, tools, radios and lights up to 200W continuous, with peaks up to 240W, overload protected. Produces a square wave output which is not recommended for devices where high transients are not tolerable. 4 1/2" h x 8" w x 9" d, 9 lbs. **\$59⁹⁵**

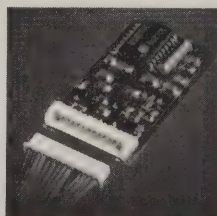
Aircraft

- **2412** Converts 22 to 32V DC input to 13.8V DC output @ 9 amps. Eliminates tapping into 28V battery for 12V **\$59⁹⁵**
- **2412-20** Same as above, but rated 16 amps output **\$79⁹⁵**

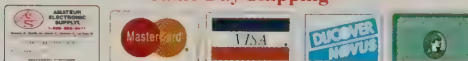
NORCOMM

Sub-miniature Touch-Tone® Decoder

- **NC-401** Designed for selective signaling in many applications. Combines two distinct, separately addressable DTMF Decoders in one unit for multiple user-configurable output functions. Decodes all 16 standard DTMF characters with an address length of 1-14 characters and features EPROM memory for non-volatile storage of programmed codes, input and output functions, remote programming, deadbeat disable and user outputs. Programs by means of a conventional DTMF Encoder. Comes with 12" multiple leads and plug. 0.80" w x 1.37" l x 0.23" h **\$59⁹⁵**



Order Toll Free & use your Credit Card for Same Day Shipping



INN@VA

ELECTRONICS CORPORATION

Power source
for 12V DC
Accessories

Portable Power for anything with a male cigarette lighter plug – HAM transceivers, cellular phones, spotlights, inverters, etc ...



- **06-1101 DC POWERPACK** Contains an internal maintenance-free, sealed lead-acid rechargeable battery rated 12VDC @ 6.5 Amp/Hour, fused at 10 amp. Recharging time from a vehicle with engine running is 1 to 3 hours, or from optional AC/DC adapter, 8 to 10 hours. 7 1/2" w x 3 3/4" d x 10" h, 6.8 lbs. **\$49⁹⁵**
- **06-9509 AC/DC adapter** **\$9⁹⁵**

► 06-1130 DC POWERPACK

Like, but smaller than the 06-1130. The internal maintenance-free sealed lead-acid battery is rated 12VDC @ 3 Amp/Hour, fused at 10 amp. Recharging time from running vehicle is 2 to 4 hours, or from included AC/DC adapter, 4 to 6 hours. 3" w x 3" d x 7 1/2" h, 3 lbs. **\$49⁹⁵**



Forbes Group Ventenna™

Stealth! Get around those antenna restrictions and finicky neighbors. The **Ventenna** is virtually unnoticeable because it looks like part of the normal structure. To install, just slip it over an existing 1" to 2 1/2" plumbing vent pipe, connect up your coax and you're on the air.

Ready to go! – No Tuning or Measuring is required.

Choose from single band models for 2M, 220MHz or 440MHz and a 2M/440MHz Dual Bander.



Model	Description	Price
► VT-14	2 meters, 3 ft. tall, 2.6dB gain	\$44⁹⁵
► VT-22	220MHz, 25" tall, 2.6dB gain	\$44⁹⁵
► VT-27	2m/440MHz Dual bander	\$66⁹⁵
► VT-44	440MHz, 14" tall, 2.6dB gain	\$44⁹⁵
► VT-15S	Scanner Model 3 ft. tall, 2.6dB gain	\$44⁹⁵
► VT-SWL	SWL Model 3 ft. tall, 20dB active gain	\$99⁹⁵

Circuit Works Conductive Pen

Features a specially formulated silver thermoplastic designed to link circuit board components, repair traces, make jumpers and shield delicate electronics. Easy to apply, air dries in 3 to 5 minutes at room temperature, achieves maximum conductivity after 20 minutes. Can be heat cured in 1 to 2 minutes at 250 to 300°F. May be soldered at 350°F for <5 seconds after heat cure by using a low temperature tin, lead or silver solder with flux for best results. Traces 1/32" and wider – contains enough material for 100 ft. **\$10⁹⁵**



TOP TRADES: We take Clean, Late Model Gear in trade towards New Equipment shown in this catalog ...

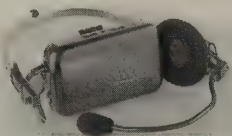
maxon SYSTEMS INCORPORATED

49 MHz Personal Communicators

Low Power • 1/4 mile average range • No license required

Dual conversion superhet receivers provides crisp, clear voice transmission. Units are compatible, use for group communications. Voice activated (VOX) lets you transmit/talk, or use bypass for push-to-talk (PTT). Volume and microphone sensitivity controls prevent outside noise from false triggering the VOX circuit. **MAXON Operating Channels:** (A) 49.830 MHz, (B) 49.845 MHz, (C) 49.860 MHz, (D) 49.875 MHz, (E) 49.890 MHz.

► **MX-49SX** A single-channel unit featuring a lightweight adjustable headset with retractable whip antenna, LED indicator, boom microphone with windscreen and battery charger jack. Range up to 1/4 mile. Requires two "AA" regular or rechargeable batteries. 5" x 2 1/2" x 1", 9 oz. Specify channel A, B, or E. **\$29⁹⁵**



► **MX-49FX** Features 5 channels and a combination earphone-microphone that picks up voice vibrations from the ear canal for transmit, and also provides receive audio. Built-in antenna gives up to 1/8 mile range, and will not interfere with helmets.

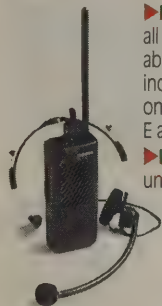


remote PTT button and channel selector. Requires 3 "AA" batteries. 5 1/2" x 3" x 1", 6 oz. Channels A, B, C, D & E. **\$59⁹⁵**

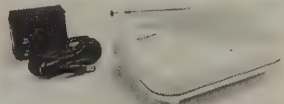
► **MX-49HX** A 5 channel unit, ideal for motorcycling and snowmobiling, etc. The helmet-adaptable headset has a whip antenna and boom microphone with windscreen. VOX or PTT with on-unit or remote switch. Front mounted off/on/volume, VOX sensitivity and detent channel selector. Jacks for opt. passenger intercom headset. Requires 3 "AA" batteries. 3" x 5 1/2" x 1", 6 1/2 oz. Channels A, B, C, D & E. **\$49⁹⁵**



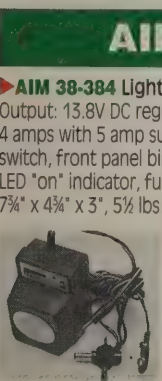
► **PC-10** Single channel unit compatible with all Maxon 49MHz units. PTT or VOX. Detachable headset with boom microphone included. Approx. 1/4-mile range. Operates on three AA alkaline batteries. Channels A, B, E available, specify **\$39⁹⁵**



► **PC-50** Similar to PC-10, but a 5 channel unit - A, B, C, D, and E. **\$59⁹⁵**

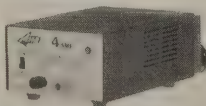


► **WX-70** Weather Monitor Receives weather service broadcasts on seven N.O.A. stations: 162.550, 162.400, 162.425, 162.475, 162.450, 162.500, and 162.525MHz. Choice of three different severe weather "Alert" warning modes. 110V with supplied AC adapter, uses a 9V battery for back-up. **\$49⁹⁵**



AIM Electronics

► **AIM 38-384** Light Duty DC Power Supply Input: 115V AC, Output: 13.8V DC regulated. Rated 4 amps with 5 amp surge. On/off switch, front panel binding posts, LED "on" indicator, fuse protection. 7 3/4" x 4 3/4" x 3", 5 1/2 lbs. **\$39⁹⁵**



► **AIM 38-305** AC Adapter Multi-voltage, rated at 500MA. Cord has multiple application plugs and 9V snaps. Converts 117 VAC to low voltage DC to operate battery powered equipment requiring 3, 4.5, 6, 7.5, 9 or 12 volts DC. **\$12⁹⁵**



► **AIM 38-312**

Regulated AC Adapter Multi-voltage, rated at 1200MA. Cord has multiple application plugs and 9V snaps. Converts 117 VAC to low voltage DC to operate battery powered equipment that requires 1.5, 3, 4.5, 6, 7.5, 9 or 12 volts DC. **\$24⁹⁵**



Low Power VHF & UHF Handhelds

Ideal for for short range communications at construction sites, in factories, or security, etc.



► **COURIER PROCOM** VHF, 2 ch with 1 frequency installed. 2W out. Specify: 151.625, 154.570 or 154.600 MHz. Rechargeable battery/charger. 7" h x 2 1/2" w x 1 3/4" d 16 oz. **CLOSEOUT \$139⁹⁵**

► **New! COURIER M-510** VHF, 10 channels - synthesized and programmable from 144-174MHz. 5W output (3 power levels). Rechargeable nicad battery, AC charger, flexible antenna, F.C.C. license application included. 4 1/4" h x 2 1/2" w x 1 1/4" d, 15 oz. **\$269⁹⁵**

► **COURIER M-54** VHF, 4 channels, 5W, comes with 151.625 MHz installed. 5 1/4" h x 2 1/2" w x 1 1/2" d 15 oz. **\$199⁹⁵**

► **COURIER PROCOM U-22** UHF, 2 ch, 2W, includes crystals for one frequency. Specify: 462.575 462.625, 462.675, 464.500 or 464.550MHz. 7" h x 2 1/2" w x 1 3/4" d, 16 oz. **CLOSEOUT \$149⁹⁵**

► **RANGER RCI-1000** VHF, 1W output, 2 channels. Includes two sets of crystals installed for 151.625 and 154.57MHz or 154.60 and 154.57MHz. Rechargeable nicad battery and AC charger, flexible antenna. 4 1/4" h x 2 1/2" w x 1 1/4" d, 12 oz. **\$139⁹⁵**

WALNUT CREEK



► **QRZ! Ham Radio CDROM Volume 4** Winter 1995 edition Contains the most up-to-date US FCC amateur radio license data with 700,000 names, addresses and callsigns. Contains an all-new shareware collection with 7031 data files covering all facets of amateur radio - over 600 Megabytes of information. Powerful new QRZ-II Windows search and retrieval software - locates any callsign on the disk in less than 2 seconds. Search and display by callsign, name, city, street address, or zip code. Runs under Windows, NT, DOS, OS/2, Warp, UNIX, and Wabi with sample source code for those who prefer to create their own interfaces. All of the QRZ! databases are in documented, open, and non-encrypted ASCII format. **WAL HAMQRZ \$29⁹⁵**

QRZ! Ham Radio CD ROM also includes:

- 1000's of PC compatible Amateur Radio Programs
- ARRL Information files and bulletins
- 100's of Radio and Scanner MODS
- TCP/IP software, Packet Radio BBS's, and Satellite Tracking Programs
- Morse Code Training Software, Radio Control Programs, Contest Logging Software
- RTTY, WEFAX, Baycom, Rose, TheNet, TAPR and DSP files
- USENET Ham Radio News Archives, ARRL Bulletins
- Sound Blaster Compatible .WAV files for TNC Testing
- Windows Visual Basic and C++ Compatible .DLL Library
- Source code and executables for SunOS and AIX UNIX



BUCKMASTER

HamCall/CD ROM for Apple Mac and IBM PC Compatibles

HamCall CDROM Contains over 1,104,844 calls including over 350,000 international with call sign, name, address, license class, expiration date, and birth year data. Over 658,000 U.S. listings with class, birth year, expiration date, latitude/longitude, grid square, county, time zone, area code, elevation and station address. Clubs, military and RACES. Over 100,000 cross references from old to new calls. Over 800 PC public domain program and data files (over 400 ZIP files) **BUC HAMCALL \$50⁰⁰**

Other features:

- New Windows version of ICALL
- Retrieve by call, name, zip, etc. (U.S.)-PAC/MAC, exact field searches now possible
- Copy output to disk or printer, print labels
- No hard disk is required
- Use on bulletin boards (packet and landline)
- Works with many logging and contest programs
- Unrestricted non-pecuniary use
- ICALL calculates beam heading and distance between U.S. stations, and show grid square

RANGER Marine

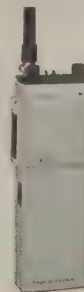
► **RCI-6060** Keypad entry, covers all U.S. and International channels +10 weather channels. All channel scanning, direct access to channel 16 and dual watch mode. Back-lit LCD display, power Up/Down mic switch and external speaker jack. Power: 25W (High), 1W (low). Weather resistant housing, flush mounts. 3" h x 7 1/2" w x 8 1/4" d, 2 lb **\$169⁹⁵**



► **RCI-7000** (right) Digital thumb-wheel selection of all U.S. and international channels + 8 weather channels. Direct channel 16 access, dual watch mode. Power: 5W (high) 1W (low). External speaker jack. Rechargeable battery pack/charger. 7 1/4" h x 2 1/2" w x 1 1/2" d. **CLOSEOUT \$149⁹⁵**

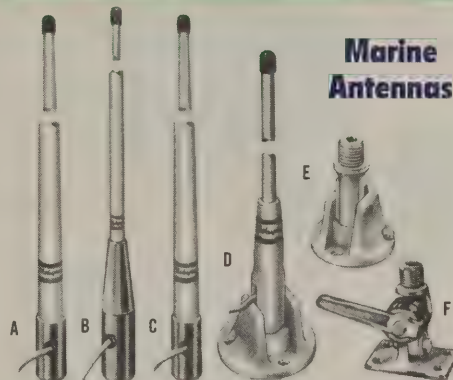


► **RCI-9000** (left) All features of the RCI-7000, but keypad entry and including LCD display, 10 wx channels, and memory scan **\$189⁹⁵**



SHAKESPEARE

Marine Antennas



► **5202 (A)** Collinear-phased 5/8-wave elements. 6dB gain. 8 ft. long, handles 50W. DC grounded. Chrome-plated brass ferrule. Includes 20 ft. of coaxial cable with connector. **\$69⁹⁵**

► **497 (B)** Collinear phase 5/8-wave elements. 6 db gain. 8 ft. long, handles 50W - not DC grounded. Smaller diameter absorbs flex. Includes 20 ft. coaxial cable with connector. **\$49⁹⁵**

► **5206-C (C)** Economy model, end fed, 8' long with 6dB gain. Handles 50W, DC grounded. 15 ft. coax. w/connector. **\$39⁹⁵**

► **420 (D)** Center-fed 1/2-wave coaxial sleeve model. 3dB gain, 5 ft. long. Polycarbonate lift and lay deck mount with leveling plate, hardware and 20 ft coax cable with connector. **\$49⁹⁵**

► **495 (E)** Lift and lay polycarbonate deck mount. **\$14⁹⁵**

► **366H (F)** Ratchet mount with handle for deck or bulkhead mounting. Has 9/32" hole for Loran cable. Standard 1"-14 male threads. Chrome plated zamac. **\$24⁹⁵**

ICOM Aircraft & GPS

► **ICOM A-21** NAVICOM PLUS VHF Air Band HT 760 channels, 10 WX and 20 memory channels. Programmed scan, memory scan and lock output. 5W output. Instant 121.5MHz NAV features: 200 ch., VOR nav with CDI, radial heading to/from VOR station, auto bearing set Semi-duplex-combines VOR/COM operation. 2 1/2" w x 7 3/4" h x 1 1/2" d, 1.4 lbs **CLOSEOUT \$499⁹⁵**

► **ICOM A-22** NAVICOM Compact Air HT **\$549⁹⁵**

► **ICOM GP-22** GPS Receiver (right) Fast and accurate positioning worldwide! instant navigation, course and speed over ground. Cross track error, ETA, bearing and range to a waypoint and more! 2 1/2" x 1 1/2" x 5 1/2", 3 1/2 oz. **CALL**





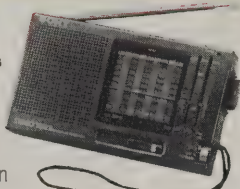
Shortwave Radios & Communication Receivers

SONY

► **ICF-SW10** Compact and convenient, easy to use. 12 bands—covers AM broadcast, FM (stereo with headphones) and 9 shortwave bands. Easy analog tuning with tuning indicator for accuracy. 6" w x 3 1/2" h x 1 1/4" d, 12 oz. **\$49⁹⁵**



► **ICF-SW30** 12 bands. Covers AM, FM (stereo w/headphones) and 10 shortwave bands. Auto Scan Tuning in 1 KHz steps, 15 memory presets. Clock has world and local time display, alarm and sleep timers. Requires three "AA" batteries or external 4.5VDC. 4 1/2" h x 6 3/4" w x 1 1/4" d... **\$99⁹⁵**



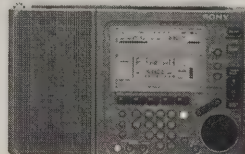
► **ICF-SW33 WORLD BAND RADIO** 13 bands, covers 0.5–26.1MHz AM and 87.6–108MHz FM stereo (with earphones). Scan tuning and 17 station memory presets. World time clock displays 38 city names and times, and has five time presets, sleep timer and auto shut-off. News/Music tone control, battery indicator. Supplied with telescopic antenna, carrying case. Requires three "AA" batteries or external 4.5VDC. 6 1/2" w x 3 3/4" h x 1 1/4" d, 14.2 oz. ... **\$169⁹⁵**



► **ICF-SW55 WORLD BAND RECEIVER** Similar to ICF-7600, improved. Factory preset name tuning provides access to most listened to broadcasts. Tuning methods: preset station, direct, scan or rotary dial. 125 memories. Requires four "AA" batteries or external 6VAC, AC adapter included. 4 1/4" h x 7 3/4" w x 1 1/4" d, 1 1/2 lbs. **\$349⁹⁵**



► **ICF-2010** Covers 150KHz–30MHz, 76–108MHz and 116–136MHz MHz; AM/FM/SSB/CW. Tunes manually or by keyboard entry, automatic scan, memory scan or 32 memory presets. LCD display, switchable IF bandwidth, fine tune. 12/24-hour clock with alarm, programmable timer, and sleep timer. Telescoping and built-in ferrite bar antennas, 4" speaker. Record, earphone, external antenna and DC jacks. Operates from 3 "D" and 2 "AA" batteries, 12V DC, or 110V AC adapter. 6 1/2" h x 11 1/4" w x 2 1/4" d, 3 1/2 lbs. **\$369⁹⁵**

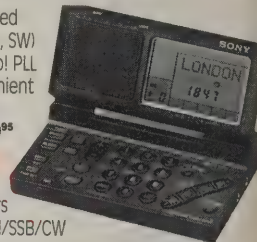


► **ICF-SW77** Same coverage (except aircraft) and features as ICF-2010. Stores up to 100 stations (162 frequencies), allows stations to be selected by name and is capable of storing broadcast schedules. Programmable 6 character Station Name Display, 50 Hz tuning resolution, FM stereo reception with stereo headphones **\$499⁹⁵**

► **ICF-SW100S** The size of a pocket calculator, but loaded with features of radios twice its size! Covers AM (LW, MW, SW) FM stereo reception with headphones. SSB reception too! PLL quartz frequency synthesis 1 kHz step. tuning. 50 convenient memory presets. Display shows 24 city names and digital time. 4 1/2" h x 2 1/2" w x 1 1/4" d. **\$369⁹⁵**



► **ICF-SW7600G WORLD BAND RECEIVER** Covers 150KHz–30MHz AM/SSB/CW modes and 76–108MHz FM (stereo with earphones). 10-key Direct Access Tuning™ and 20 station presets, LCD display. Tone control, external antenna and record jacks, clock/timer with sleep and standby functions, tilt bracket. Includes compact reel antenna, and carrying case. Requires four "AA" batteries. 4 1/2" h x 7 1/2" w x 1 1/4" d, 1 1/2 lbs. **\$199⁹⁵**



GRUNDIG

► **SATELLIT 700** Covers 1.6–30MHz includes AM, FM and LW bands with 512 standard memory positions. FM stereo with headphones or external speakers (not included). Direct frequency entry via backlit keypad, SSB and synchronous detectors, wide/narrow filters. Dual clocks and turn-on timers, sleep timer, 8 character memory bank labeling with 2,048 memories possible. LCD multi-function display, Built-in telescoping, ferrite antenna and ext. antenna connector. Operates from 110/220V AC, 4 "D" alkaline or nicads, built-in charger. 12" w x 7" h x 2 3/4" d, 4 lbs. ... **\$439⁹⁵**



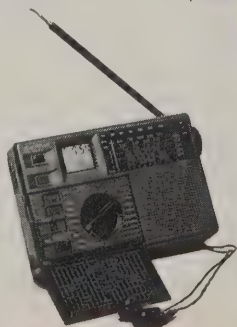
► **YACHT BOY 400** Covers 1.6–30MHz, all shortwave bands plus FM-stereo (with earphones), AM and long wave. Direct keypad frequency entry or scan tuning with 40 memory presets. Single sideband (SSB) reception with fine tuning control, high-low tone switch. Tilt stand, telescoping antenna. Multi-function LCD display shows time, frequency, band, automatic turn-on and sleep timer. Dual 24 hour format digital clocks. Includes stereo earphones, compact external reel-up antenna for SW, and carrying pouch. Requires six "AA" batteries or external 9VDC source. 4 1/2" h x 7 3/4" w x 1 1/4" d, 1 1/2 lbs. **\$199⁹⁵**



► **YACHT BOY 305** Continuous SW coverage from 2.30 to 21.85MHz without gaps. Includes all existing SW bands plus FM-stereo, and medium wave. 30 memory presets. Direct entry digital tuning, auto-scan and up or down slewing. Large cavity speaker enclosure for true rich sound. Requires 2 C-cell batteries, or external 110V AC adapter. 4" h x 7 1/2" w x 1 1/2" d, <1 lb **\$129⁹⁵**



► **TRAVELLER II** 7 bands, covers AM/FM broadcast the 19, 25, 31, 41, 49M shortwave bands and 5.8–15.6MHz. Multi-function LCD display, pushbutton and slide controls, tuning indicator. World time selection switch - select a city and read the time! Clock with travel alarm. Requires 3 size "AA" batteries (not included). Telescoping and built-in ferrite antenna. 2" speaker, jacks for earphones and ext. AC adapter (not included). 5 1/2" w x 3 1/2" h x 1 1/4" d **\$99⁹⁵**



SONY CLOSEOUT!

► **ICF-SW800** Digital performance at an analog price! Comes with three plug-in memory cards with 60 pre-programmed station presets—VOA, BBC, DE, etc. plus a clock card and blank user programmable card, plus it's keyboard programmable. Covers 3.7 to 17.9MHz AM and FM. 4 1/2" h x 7 1/2" w x 1 1/4" d, 1.2 lbs.

**While they last!...
\$59⁹⁵**



PANASONIC

► **RF-845 PORTABLE RECEIVER** Covers (SW) 1.62–29.99MHz; (MW) 520–1610KHz; (FM) 87.5–108MHz; (LW) 144–288kHz. Capable of SSB reception. 6-Way multi-tuning system has 18-station preset memory, frequency direct access, meter band access, up/down manual tuning, memory search with signal strength and auto tuning. LCD display, quartz clock with sleep timer, high or low tone selector, DX/Local sensitivity selector. Deluxe carrying case, ext. antenna wire for shortwave reception, hand strap and earphone included. Requires four "AA" batteries (not included). 4 3/4" h x 8 1/2" w x 1" d, 1.6 lbs. **\$169⁹⁵**



YAESU

► FRG-100B HIGH PERFORMANCE COMMUNICATIONS RECEIVER

Covers 50KHz to 30MHz with CW, SSB, AM and optional FM modes. 50 fully-tunable memory channels store frequency, mode and filter selection; 2 additional memories provide band edge information used in scanning function. Multi-function scanning (memory, band selectable group, priority) with carrier or time-delay resume enables convenient searching for new stations, or scanning within a known band. Twin 12 and 24 hour programmable clocks with on/off-timer and sleep-timer. Yaesu CAT system for PC control. 9.3" w x 3.6" h x 9.5" d, 6.6 lbs. **CALL for PRICE**



Shortwave Radios & Communication Receivers

ICOM

► ICOM R-71A HF RECEIVER

Covers 100kHz to 30MHz, all modes (FM is optional). Dual VFOs and direct keyboard entry, thirty-two tunable multi-function memories. RIT, notch, selectable AGC, noise blanker, tone, squelch, recording jack. Selectivity: 500 Hz, 2.3 kHz, 6 kHz, 15 kHz. Optional wireless remote controller and voice synthesized readout board. 110/220V AC operation with an optional kit for 12VDC. 11 $\frac{1}{2}$ "w x 4 $\frac{1}{2}$ "h x 10 $\frac{1}{2}$ "d, 16 $\frac{1}{2}$ lbs. **CALL**



► ICOM R-7100-12 VHF/UHF RECEIVER

Coverage from 25 to 2000MHz (except 800-900 MHz). Dial and keyboard entry, 900 numbered memory channels. Multiple scan capabilities with new window scan, clock with timer, optional TV receive capability. **CALL**



► ICOM R-100-11 BASE OR MOBILE RECEIVER

Covers 500kHz-1800MHz (800-900MHz blocked); with FM, wide FM and AM modes. Keyboard and manual tuning, selectable steps and seven scanning modes. 121 memories: 100 for frequency, mode, attenuator and preamplifier settings; 20 scan edge for 10 pairs of ranges for programmed scan and 1 priority. Three antenna inputs, 24-hour clock/timer. Telescoping ant., DC cord and mobile mount included. 13.8VDC @ 1A **CALL**



► **ICOM R-1-15 HANDHELD SW RECEIVER** Covers 100kHz to 1300MHz (except 800-900MHz); FM/wide-FM and AM. 100 memory channels. Programmed, memory, selected mode memory, and auto memory write scanning. Rotary tuning or direct keyboard entry, LCD display, 24-hour clock with timer, adjustable LCD contrast, signal indicator. Power-saver function, built-in Nicad batteries; or use optional batteries or 6 to 16VDC from external source. 1 $\frac{1}{2}$ "w x 4" h x 1 $\frac{1}{2}$ "d **CALL**



DRAKE

► DRAKE SW-8 COMMUNICATIONS RECEIVER

Covers 500kHz to 30MHz, 87 to 108MHz FM broadcast (stereo at headphone jack), and the 116 to 136MHz aircraft band. Standard and synchronous detection AM, and SSB reception on medium and shortwave bands. Direct frequency entry keypad, 0.5uV sensitivity, dual 6 or 4 kHz selectivity on AM, sharp 2.3kHz selectivity on SSB. High contrast LCD readout provides 100Hz tuning accuracy. Dual-mode clock timer and 70 scannable memories. Powered by optional internal batteries or with supplied AC adapter. 10" w x 4" h x 11 $\frac{1}{4}$ " d, 10 lbs **\$699⁰⁰**



► **DRAKE R-8A COMMUNICATIONS RECEIVER** Covers 100kHz-30MHz with added coverage: 33-55, and 108-174MHz with optional VHF converter. Alpha-numeric display, dual VFOs; 440 memories; multiple-function scanning; AM, FM, RTTY, CW, SSB modes; four voice bandwidth filters; switchable preamplifier and attenuator; dual noise blanker; IF shift and notch. S-meter, fluorescent display; dual time zone clock; dual timers, dual antenna connectors. Single button access to mode and bandwidth selection. RS-232 control capable. Optional interface software for ms DOS computers and external speaker. International power supply. 13 $\frac{1}{2}$ "w x 5 $\frac{1}{4}$ "h x 13" d, 13 lbs..... **\$1079⁰⁰**



KENWOOD

► R-5000 COMMUNICATIONS RECEIVER

Covers 100 KHz-30MHz; 108-174MHz; optional VHF converter. SSB/CW/AM/FM modes. Dual VFO & keyboard frequency control, 100 multi-function memories. 6kHz and 2.5kHz SSB filters; accepts 2 more for CW, SSB or AM. Selectable AGC, variable attenuator, noise blanker, notch filter, IF shift. Dual 24-hour clocks/timer. Mute, record and headphone jacks. Optional VHF, speaker, earphones, filters, voice synthesizer, computer control, DC cable. 117V AC (13.8VDC kit is optional.) **CALL**



MFJ

► MFJ-8100K & 8100W

SHORTWAVE REGENERATIVE RECEIVER

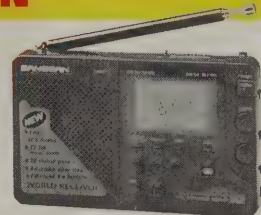
Has an RF stage to really pick up weak signals and it goes into regeneration smoothly without pops or dead spots. Stations all over the world will come in loud and clear with just a 10 foot wire. Listen to international shortwave broadcasts, hams on SSB and CW, WWW, RTTY, packet and more. Covers all or part of 75/80/49/40/30/20/25/22/19/17/16/15/13 meter bands in 5 bands. Smooth vernier reduction drive, bandswitch, volume and RF Gain controls. rugged aluminum cabinet. Uses a 9V battery or external DC source. Has two earphone jacks for Walkman style earphones or plug-in speakers **See MFJ in the Price List**



Accessories for these Shortwave Radios are shown in the Price List...

SANGEAN

► **ATS-202** 15 bands, covers AM, FM-stereo (with headphones), 2.3 to 7.3 and 9.5 to 26.10MHz. MW 9k/10k switch. Manual and automatic station search, 20 station memory presets. Large backlit LCD display, clock with alarm and sleep timer. Low battery indication. Requires two "AA" batteries or external 3VDC. 5 $\frac{1}{4}$ "w x 3 $\frac{3}{8}$ "h x 1 $\frac{1}{8}$ "d, 8.7 oz **\$89⁹⁵**



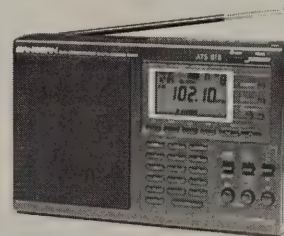
► **ATS-803A** 15 bands, covers 150kHz-281kHz AM/SSB/CW, FM-stereo (via headphones), 11, 13, 16, 19, 25, 31, 41, 49, 60, 75, 90 & 120m SW. Keypad or manual tuning with auto scan and 9 memories. LCD display, Built-in 4" speaker and telescoping antenna. External antenna adapter, shoulder strap, AC adapter, stereo earphones & SW handbook. Requires 4 "D" and two "AA" batteries. 11 $\frac{1}{2}$ "w x 6 $\frac{1}{2}$ "h x 2 $\frac{3}{8}$ "d, 3 $\frac{1}{2}$ lbs.



CLOSEOUT - \$169⁹⁵

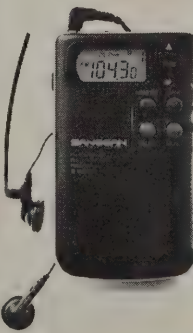
► ATS-818CS World Band Receiver with Programmable Cassette Recorder

16 bands, continuous coverage from 50kHz-30MHz AM/SSB/CW, FM-stereo (via headphones). 45 memory presets. Tuning methods: Direct input, auto or manual scan, memory recall, rotary Dial. AM wide/narrow filter, tone/RF gain controls, signal strength/battery indicator. Programmable cassette recorder, play/record LED indicator, auto-stop feature. Clock feature with dual time display, alarm and sleep timer. Requires 7 "AA" batteries. Includes AC adapter, ext. antenna adapter. 11 $\frac{1}{2}$ "w x 7 $\frac{3}{8}$ "h x 2 $\frac{3}{8}$ "d, 5 lbs ... **\$229⁹⁵**



► **ATS-818** World Band Receiver All of the features as the ATS-818CS above, but without the built-in cassette recorder **\$179⁹⁵**

► **DT-200V** Broadcast & TV Band Receiver Compact!-fits in shirt pocket or clips to belt. Covers AM/FM (FM stereo via headphone) plus the audio portion of TV channels 2-13. LCD display, up/down tuning, auto-scan, 19 memories, auto shut-off. Built-in speaker. Belt clip, stereo earphones included. Requires 2 "AA" batteries. 4 $\frac{3}{8}$ " x 2 $\frac{3}{8}$ " x $\frac{3}{8}$ ", 5 oz..... **\$69⁹⁵**



**Jeff, N9EDQ
AES®
"Shortwave Expert"
1-800-558-0411**



GRUNDIG

The Latest in Technology

Rated Best in Its Class.

Grundig's Yacht Boy 400 has received rave reviews from the shortwave press for combining a wealth of sophisticated features in one compact, portable package that doesn't cost a fortune. It incorporates features found on stationary shortwave systems that cost thousands, such as outstanding audio quality, precise 1 kHz increment tuning, up/down slewing, frequency scanning, signal strength indication, and single-sideband signal demodulation.

But the advantage mentioned most often in the YB-400 reviews was its ease of use for the novice listener. Following the included Grundig Shortwave Listening Guide, in moments you can be listening to foreign broadcasts beamed to North America.

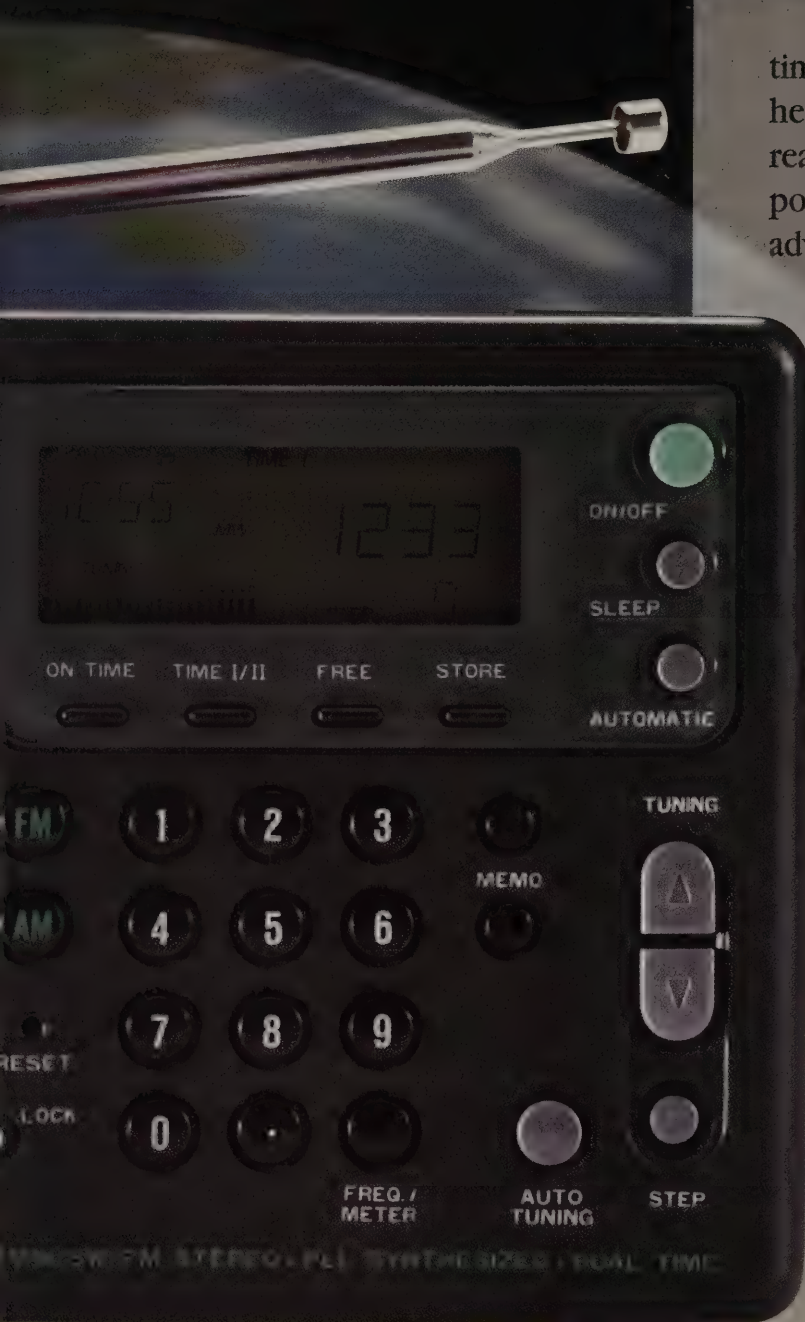
Soon, you will be scanning the airwaves to tune in exotic music programs and sports events from faraway locales. The YB-400 even picks up shortwave amateur (ham radio) broadcasts and shortwave aviation/military frequencies (cockpit-to-tower communications). The possibilities for family fun, education, and enjoyment are boundless.

For travel or home use, Grundig adds a dual-time travel clock with snooze and sleep



Yacht Boy 400

The Best in Value



timer. FM band is stereophonic with your headphones. The lighted LCD panel is easy to read in the dark. Comes with a form-fitting pouch, integral telescoping antenna and advanced external antenna on a compact reel, carry-strap, batteries, earphones and complete instructions.

Made by Germany's Grundig.

World leader in shortwave radios, the 400 measures just 7-3/4" L x 4-1/4" H x 1-1/4" W; weighs only 20 oz. It slips easily into your carry-on for travel and fits on a nightstand, office credenza, or yacht cabin console.

One-year warranty.

Grundig's Yacht Boy 400 Named Editor's Choice.

Passport To World Band Radio is regarded as the leading authority of the shortwave industry. Here's what their testing expert wrote about the Grundig Yacht Boy 400:

"Best performance for price size category, and among the choicest portables of any size, at any price."

"The 400's FM performance is right up there with the very best among world band radios."

GRUNDIG**WORLD RECEIVER****THE ULTIMATE IN DIGITAL TECHNOLOGY**

SATELLIT 700 — the latest and most sophisticated portable world receiver available! Featuring phased lock looped synchronous digital circuitry for seamless AM, FM, LW, and SW reception from 1.6 – 30 Mhz. From London to Lithuania to San Francisco, tune in the world easily with its unique digital or manual tuning. With Grundig, the world is at your fingertips.

**GERMAN ENGINEERING ANNOUNCES
A BREAKTHROUGH IN MEMORY**

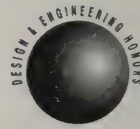
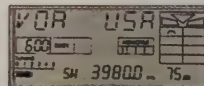
GRUNDIG SATELLIT 700		
Code	Station	Display
0.1	Deutsche Welle	DW
0.2	Deutsche Welle	DW
0.3	Radio Austria International	RAI
0.4	Radio France International	RFI
0.5	Radio Nederland	RNE
0.6	Radio Proxima International	RPI
0.7	Radio Romania International	RRI
0.8	RBC / London	RBC
0.9	RBC / London	RBC
1.0	Radio Moscow World Service	RMS
1.1	Radio Moscow World Service	RMS
1.2	Radio Japan	RJ

The unprecedented 120 factory pre-programmed frequencies for worldwide reception makes tuning into the world's shortwave radio broadcast almost as simple as touching a button. You also have 512 alpha numeric user-programmable

memory positions which can be expanded to 2048 memory positions so you can build your own favorite-station radio archive!

WORLD CLASS RECEPTION

With PLL Tuning, selectable wide/narrow band width filter, and a redesigned and vastly improved synchronous detector, the Satellit 700 offers unparalleled reception, sensitivity and selectivity. The 700 comes equipped with a built-in NiCad battery charger, the Grundig shortwave frequency guide, and a one-year warranty covering parts and labor. If you have any questions regarding the Satellit 700, please call our shortwave Hotline and talk to the experts, U.S. (800) 872-2228, and Canada (800) 637-1648 (9AM to 4PM PST).


 INNOVATIONS 93
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Clearwater, FL 34625
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 1072 N. Rancho Drive
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uniden

Scan the Action!

- Ham Radio
- Police, Fire
- Emergency
- Weather
- More ...

► UNIDEN BC-147XLT-1

A 16 channel Base unit covering 10 bands, including weather. Covers 29-29.7, 29.7-50, 50-54, 136-144, 144-148, 148-174, 406-420, 420-450, 450-470 and 470-512MHz.

Two-digit LED display shows the current channel selection and scanning. Keyboard Entry; Direct Channel Access; Manual Step Tuning; Scan; Lockout; Priority; Review; Weather Search; Automatic Squelch; Track-Tuning; Memory Back-up; Three Scan Speeds. 9" w x 2 3/4" h x 6 1/2" d, 1.2 lbs **\$99⁹⁵**

► UNIDEN BC-148XLT-1

16 channels and 10 bands with weather alert. Programmable; Digital; AC/DC operation. Frequency coverage: 29-54, 136-174 and 406-512MHz. Weather button; Priority; Lockout button; Squelch. AC adapter and telescoping antenna included. 9" w x 2 3/4" h x 6 1/2" d, 1.2 lbs **\$99⁹⁵**

► UNIDEN BC-350A

50 channel programmable Mobile or Base unit scanner with aircraft; 11 bands, LCD display; Turbo scan; 20 programmable private channels; 20 programmable police channels; 10 programmable fire and emergency channels; Band scan for aircraft; Marine & weather; Band search. Mounting bracket; AC adapter, cigarette power cord and DC power cord included. 5 1/2" w x 6 1/2" h x 1 1/2" d, 1 lb. 11 oz. **\$119⁹⁵**

► UNIDEN BC-700A

50 channel programmable Mobile or Base unit scanner with aircraft 12 bands, LCD display, Turbo Scan™. Same as BC-350A with 800MHz (not cellular) **\$179⁹⁵**

► UNIDEN BC-178XLT

100 channel programmable Base unit scanner with aircraft. 11 bands, and 5 scanning banks, LCD display; TurboScan™ & search; Weather scan & search; 5 priority channels; Data skip; Service search; Automatic squelch; Programmable delay, AC adapter included. 9" x 6 1/2" x 2 1/2", weighs 1 lb. 7 oz. **\$149⁹⁵**

► UNIDEN BC-560XLA

16 channel, programmable Mobile unit. 10 bands: 29.0-29.7, 29.7-50, 50-54, 136-144, 144-148, 148-174, 406-420, 420-450, 450-470 and 470-512MHz. Pushbutton Entry; Two-Digit LED Display; Review Key; Priority; Memory Back-up; Channel Lockout; Direct Channel Access; Weather Search; Built-in Delay; Track Tuning. mobile bracket included. 13.8V DC. 6 1/2" w x 1 1/2" h x 5 1/2" d, 1 1/2 lbs. **\$99⁹⁵**

► UNIDEN BC-760XLT

100 programmable channels, 5 scanning banks, 12 bands cover 29-54, 118-136, 144-174, 406-510, 470-512 and 806-956 MHz (no cellular). Auto search; Priority. 13.8V DC or 117V with AC adapter. 6 1/2" w x 1 1/2" h x 7 3/4" d, 1 lb., 3 oz. **\$229⁹⁵**

► UNIDEN BCT-2 Bear Tracker

Preprogrammed for Highway Patrol, D.O.T., Local Police and Weather. Select your state and listen! Responds to signals from special "Mobile Extender" transmitters used by Highway Patrol vehicles. Alerts presence of patrol units within a 3 mile radius. Mounting bracket and DC power cord. 5" w x 7" d x 1 1/2" h, 1 lb. **CLOSEOUT \$139⁹⁵**

► UNIDEN BCT-7 Bear Tracker

800 Preprogrammed with all frequencies for Highway Patrol, D.O.T., Local/County Police, News, Fire, Aircraft and CB. Selectable by state (except Hawaii). 12 bands, 100 user programmable channels: Highway Patrol Priority Alert; Data Skip, Weather Scan. 13.8 VDC or 117V with AC adapter (included). Mobile mopunting kit. 5" w x 7" d x 1 1/2" h, 1 lb, 11 oz **\$199⁹⁵**

► **UNIDEN BC-9000XLT** 500 channel continuous band scanner, covers 25-1300 MHz (no cellular). 20 banks. VFO control; 10 priority channels; AM, WFM and NFM modes; TurboScan™ and Search; LCD dot matrix alpha display; Data skip; Frequency transfer; Automatic store; Aux. line output for recording; optional CTCSS. Antenna and AC adapter included. 10 1/2" w x 7 1/2" d x 3 1/2" h, 4 lbs. **\$429⁹⁵**

► UNIDEN BC-860XLT

Programmable scanner with Aircraft 100 channels 12 bands, 10 banks. Covers 29 to 956MHz (no cellular). Full frequency LCD; Twin Turbo™ scan and search; One-touch weather scan; Manual channel access; Automatic squelch; 9" w x 2 1/4" h x 6 1/2" d, 1.2 lbs **\$199⁹⁵**

► UNIDEN BC-890XLT

200 channel programmable Mobile or Base unit scanner with aircraft, military air and 1 1/2 m Ham Band. 14 bands, 10 scanning banks. LCD display, TurboScan™; 10 priority channels; VFO control; Frequency transfer; Automatic store and sorting; Count key; Weather alert; Optional CTCSS capability. AC adapter included. 10 1/2" x 7 1/2" x 3 1/2", 3 lb. 10 oz. **\$269⁹⁵**

► UNIDEN BC-60XLT

10 channel, programmable handheld scanner, 10 bands. Two-digit LCD display; review; One touch weather battery-low indicator, built-in scan delay, keypad lock-out, AC/DC operation, AC adapter included. 4AA batteries required for DC operation (not included). 2 1/2" w x 6 1/4" h x 1 1/2" d, 10 oz. **\$99⁹⁵**

► UNIDEN BC-80XLT

50 channel, programmable handheld scanner. Covers 29-956MHz (no cellular). 11 bands, 5 banks, 5 priority channels, one touch weather. Manual channel access; Bands search; Full frequency LCD display; Battery-low indicator; AC operation with AC adapter included or use 4-AA Ni-Cd or alkaline batteries (not included) for DC operation. 2 1/2" w x 6 1/4" h x 1 1/2" d, 10 oz. **\$189⁹⁵**

► UNIDEN BC-120XLT

100 channel programmable handheld scanner with Aircraft coverage. 11 bands, 10 scanning banks, LCD display, TurboScan™ and search. One touch weather, 10 priority channels, data skip, belt clip, battery and wall charger included. 2 1/2" w x 1 1/2" d x 6" h, 12.6 oz. **\$149⁹⁵**

► UNIDEN BC-220XLT

200 channel programmable handheld scanner with Aircraft and 800 MHz (no cellular). 12 bands, 10 scanning banks. Programmable search. LCD frequency display, Turbo Scan™ and search. One touch weather access, 10 priority channels, data skip. Belt clip, battery and wall charger included. 2 1/2" w x 1 1/2" d x 6" h, 12.6 oz. **\$259⁹⁵**

► UNIDEN SC-150B

100 channel programmable handheld scanner with aircraft and 800 MHz (no cellular). 12 bands, 10 scanning banks. LCD display, 10 one-touch direct access channels, programmed band search. TurboScan™ and search. One touch weather, 10 priority channels, data skip. Battery and charger included. 2 1/2" w x 1 1/2" d x 6" h, 12 oz. **\$189⁹⁵**

► UNIDEN BC-3000XLT

400 channel continuous band scanner. Covers 25 to 1300MHz (no cellular) in 12 bands. 20 scanning banks; 10 priority channels; VFO control; TurboScan™; Auto-weather; Auto-store; Lockout. Rechargeable nicad battery and charger. 2 1/2" w x 1 1/2" d x 6" h, 12.6 oz. **\$399⁹⁵**



MONITOR AMERICA

► The National Communications Guide, 2nd edition. Contains over 800 pages of frequencies for federal, state, county and city public safety agencies all across the United States! Includes channelization plans and usages, maps, 10 codes and unit designators. Also lists amusement, sport, railway, military, marine, aircraft, national park frequencies. **\$24⁹⁵**



ICOM

► ICOM R-100-11 Base or Mobile Receiver

Covers 500kHz-1800MHz (800-900MHz blocked) with FM, wide FM and AM modes. Keyboard or Manual tuning. Scan functions, 121 multi-function memories, 24-hour clock, 3 antenna inputs, telescoping antenna, mobile mount. 13.8V, optional AC adapter. 5 1/4" w x 2 1/2" h x 7 1/2" d, 3 lbs **CALL**

► ICOM R-1-15 Handheld Receiver

Covers 100kHz to 1300MHz (no cellular) FM, wide FM and AM. modes. 100 memories, scanning. Rotary tune or direct keyboard entry. LCD display, 24-hr clock/timer, signal indicator, power-saver. Built-in nicad battery; charger., or 6-16VDC 1 1/4" w x 4" h x 1 1/2" d **CALL**

Channel Master Scanner Antenna

E-X-T-E-N-D Scanner Range many times with an externally mounted Channel Master Monitenna. Provides best reception for 30-50, 148-174, 450-470, 470-512 & 800-912 MHz bands.

► **Model 5094A** High-strength aluminum, and weather protected. Comes with 50 ft. length of coaxial cable and Motorola-type plug **\$39⁹⁵**

► **Model 5095A** Everything for roof-top installation: Monitenna, 50 ft. coaxial cable with plug, 5 ft. tri-mast mount, 2 ft. extension stand-out, double headed nails, and sealing washers. **\$49⁹⁵**



BMI

► **BMI Nitellogger Automatic Recorder Activator** Accepts audio output from any 8Ω audio source and provides 600Ω audio and voice activated relay operation for triggering a recording device. Only three plug-in connections. One goes to the radios external speaker jack; the other two go into the remote and microphone jacks of a cassette recorder. For ham purposes this device can make a simple crossband repeater by connecting up two HT's. Built-in monitor speaker with volume control. VOX sensitivity and delay controls. AC adapter supplied **\$69⁹⁵**

► BMI RC-1A Impedance Matching Patch Cord

Provides a proper impedance match between an 8Ω source and a 600Ω tape recorder input. Uses capacitive isolation of the audio signal and provides proper loading for the source device while 20dB of attenuation prevents input overload. Input and output connectors are standard 3.5mm mini-plugs ... **\$19⁹⁵**



PERCON

SPECTRUM CD A frequency database with over 3 million records.

Extremely easy to use, suitable for entry-level scanner enthusiasts.

Contains data for Police, Fire, Hospitals, Taxis, Businesses, State and Local Governments, Airlines, Hotels,

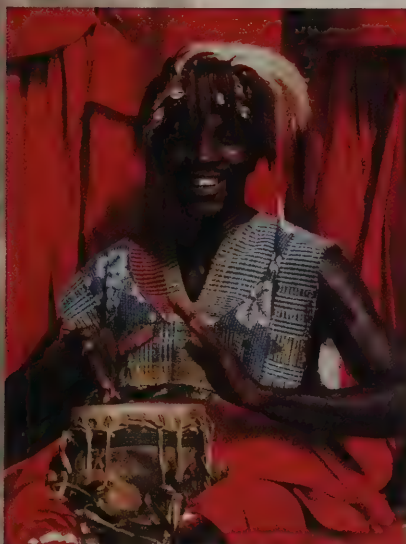
Utilities, Theme Parks, Phone Companies, and more. Shows Frequency, Callsign, Radio Service Code, Class of Station, DBA Name, Transmitter Latitude and Longitude, City/County/State, and number of mobiles for Vehicle, Marine, Air, Portable and Pagers. Extract data by a Frequency in a State, Callsign in the US, Company Name in a State, Radio Service Code in a City, and all Frequencies in a County. REQUIREMENTS: 386 Processor or above, CCA, EGA, or VGA Video Display, minimum of 2 Meg Hard Disk, CDROM Drive, and a printer for reports **\$29⁹⁵**

SONY

Travel the Sound Waves.



**Hear World Events
From A World Away.**



SONY®

Shortwave Radios
*from **AES®** the
Shortwave Experts!*



ICF-SW10

**Hear It As
It Happens.**

Imagine being able to tune in to global broadcasts from your own small corner of the world. A Sony World Band Receiver™ radio is your passport to travelling sound waves the world over. The magic of short-wave radio brings international radio signals right into your home or office, and the technology of Sony's World Band Receiver radios makes it easy to tune in to international music and news broadcasts, cultural and sports events, and weather and travel updates, so you can hear events as they happen!

ICF-SW10

World Band Receiver radios are designed to be compact and convenient. The ICF-SW10 model is no bigger than a paperback book, yet gives you access to thousands of news, weather, talk and music programs from around the world. The 12-band receiver offers touch-of-a button access to FM Stereo, MW and LW bands as well as 9 shortwave bands delivering a generous range of frequencies from which to choose. Analog tuning enables easy tuning to desired frequencies shown in easy-to-read numerals. And a tuning indicator helps bring distant stations closer and clearer than ever. Tune in and let Sony take you there.

- 12 Band Receiver - FM Stereo, MW, LW and Shortwave Bands 1-9
- Easy Analog tuning to desired stations
- Tuning Indicator for accurate tuning
- FM Stereo Headphone Jack
- DC-in Jack to conserve battery life
- Compact size:
(WHD) 6" x 3 1/2" x 1 1/4"

SONY

ICF-SW30

You don't need an airline ticket or hotel reservations to experience new adventures - all you need is the Sony ICF-SW30 World Band Receiver radio. With this sophisticated 12-band receiver, you can ride the airwaves to another continent or just to the far side of your own. Special Dual Conversion Tuner Circuitry helps to avoid interference from adjacent stations, while Digital Synthesized Tuning provides on-target reception.

- 12 Band Receiver - AM, FM and Shortwave Bands 1-10
- Digital Synthesized Tuning to desired stations
- LED Tuning Indicator for accurate frequency indication
- 15 Station Memory Presets
- Auto Scan Tuning to scan and preview the station you want
- 1KHZ Step Tuning for exact station frequency tuning
- Dual Clock/Alarm
- Compact size:
(WHD) 6 5/8" x 4 1/2" x 1 3/8"



ICF-SW30



ICF-SW33

ICF-SW33

If you're looking for the perfect travelling companion, take along the ICF-SW33 World Band Receiver Radio. Its built-in World Time Clock makes it a breeze to maintain correct local time when travelling in different time zones. And with PLL Quartz Frequency Synthesis Tuning, you can choose up to 17 stations and tune them in automatically at one touch, or scan the bands with Auto Scan Tuning before stopping at the station of your choice. Other features include:

- 13 Band Receiver including FM, AM and Shortwave Bands 1-11
- World Time Clock adjustable by city
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- Dual Conversion Super Heterodyne Tuner Circuitry for interference rejection
- 17 Station Memory Presets
- Dual Wake-up Stations and Sleep Timer
- News/Music Tone Control
- Headphone Jack
- Compact size:
(WHD) 6 1/2" x 3 11/16" x 1 3/16"

**Ride The Airwaves
To Places Far Away.**



**Experience Ancient Customs
With Modern Technology.**



ICF-SW7600G



ICF-SW100S

SONY

ICF-SW7600G

Get front and center seats to any event with the ICF-SW7600G World Band Receiver Radio. With multiband AM (LM, MW, SW) and FM stereo reception, you'll always have the best seat in the house. 10-Key Direct Access™ Tuning lets you key in distant stations as easily as calling for reservations. 22 Station Memory Presets bring you quickly and easily to your favorite stations. Features include:

- AM (LW, MW, SW)/FM Stereo Reception
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- 10-Key Direct Access™ Tuning
- SSB Reception for an even wider range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- 22 Station Memory Presets
- Dual Conversion Super Heterodyne Circuitry for interference rejection
- Dual Wake-up Stations and Sleep Timer
- 1 KHZ Step Tuning
- Compact size:
(WHD) 7 1/2" x 4 3/4" x 1 1/4"

ICF-SW100S

As the world gets smaller, so do Sony's World Band Radio Receivers. Weighing just over 7 ounces, the ICF-SW100S model is a wonder of technology - the size of a pocket calculator. As miniature as it is, this model is equipped with performance features of radios twice its size, delivering precise tuning, minimal interference and listening clarity. This model may be small, but when it comes to performance, you can't ask for more.

- AM (LW, MW, SW) FM Stereo Reception
- World Time Clock adjustable by city
- 24-City Name/Time Display
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- SSB Reception for an even wider range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- 50 Station Memory Presets
- Dual Wake-up Stations and Sleep Timer
- 1 KHZ Step Tuning
- Compact size:
(WHD) 4 3/8" x 1 1/16" x 2 7/8"



ICF-SW55

Dance to a Latin rumba, a Russian folk dance or a Viennese waltz once you step into the world of the ICF-SW55 World Band Receiver Radio. To ensure that the program you want is at your fingertips, this model can save up to 125 station names in memory. Want to hear a British concert? Just enter "BBC", and let the music begin. And to make sight, as well as sound a simple task, we've included a backlit LCD display with highly visible digital readouts of frequency, station name, clock and other functions.

- AM (LW, MW, SW)/FM Stereo Reception
- 10-Key Direct Access™ Tuning
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- Precise Manual or Auto Scan Tuning
- 125 Station Memory Presets
- Built-in Clock with Alarm, Sleep Function and Timer Stand-by
- Universal Time Coordinator
- Backlit LCD readout
- Compact size:
(WHD) 7 3/4" x 5" x 1 9/16"



ICF-SW55



ICF-SW77

ICF-SW77

World travel through the radio dial has never been so effortless. The ICF-SW77 World Band Receiver Radio offers the convenience of recalling radio frequencies by the broadcaster's name, and performance features that reduce interference and fading to produce reception of incomparable quality. A generous 4" speaker provides separate bass and treble controls for broadcasts that come to life.

- AM (LW, MW, SW)/FM Stereo Worldwide Band Coverage
- 10-Key Direct Access™ Tuning
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- SSB Reception for a wider range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- Precise Manual and Auto Scan Tuning
- 162 Station Memory Presets
- Built-in Clock with Alarm, Sleep Function and Time Stand-by
- Universal Time Coordinator
- Backlit LCD readout
- Compact size:
(WHD) 10 7/8" x 6 13/16" x 1 13/16"

**Listen To The Rhythms
Of Different Cultures.**



**Get The Hottest News
From The Coldest Climates.**



ICF-2010

ICF-2010

Sit back, take it easy and take off to the climate of your choice. With the ICF-2010 World Band Receiver Radio, you can get the hottest news from the coldest climates from the warm comfort of your easy chair. PLL Quartz Synthesis Frequency Tuning ensures that once you land on the station you want, you're there to stay. Then when you're ready to move on, Direct Access Tuning and 32 station memory presets will take you non-stop to your next destination. You'll find this little performer gets a great reception no matter where in the world you go.

- AM (LW, MW, SW)/FM Air Band Reception
- Direct Access™ Tuning
- PLL Quartz Frequency Synthesis Tuning for accurate tuning
- SSB Reception for an even wider range of listening options
- Synchronous Detection Circuitry to reduce fading and interference
- 32 Station Memory Presets
- Built-in Clock and Sleep Timer
- Manual or Automatic Scan Tuning
- Compact size:
(WHD) 11 3/8" x 6 1/4" x 2 1/16"



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Features and specifications are subject to change without notice.

Non-metric weights and measurements are approximate.

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SONY®

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Park Ridge, NJ 07656

Shortwave Accessories...

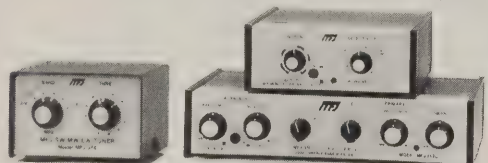


► **MFJ-1024 Outdoor Active Antenna** Covers 50kHz-30MHz. Consists of a 54 in. telescopic whip and amplifier module that mounts outside. The module is connected by 50 ft. of RG-58/U coax (supplied) to an inside control unit which contains a 20dB attenuator and a gain control to prevent receiver overload from the amplified signals. Switches select between two receivers, and auxiliary antenna. LED "on" indicator. RCA phono auxiliary input and output jacks. 12VDC or 110VAC with MFJ-1312 adapter. Control: 6" w x 2" h x 5" d, Module: 3" h x 4" w x 4" d..... **\$119⁹⁵**

► **MFJ-1020A Indoor Active Antenna** Covers 300kHz-30MHz in five bands. A 21 inch telescopic antenna provides maximum signal strength. Unit functions as a pre-

lector when using an external antenna. Minimizes intermodulation, improves selectivity and reduces noise. Tune, Band, Gain, On-Off/Bypass controls. Uses 9V battery (not included), 9-18VDC or 110VAC with MFJ-1312 AC adapter. 5" w x 2" h x 6" d..... **\$79⁹⁵**

► **MFJ-959B Antenna Tuner & Preamp** Covers 1.6 to 30MHz providing the proper impedance match between antenna and receiver for maximum signal transfer and best reception. Built-in 20dB preamplifier with gain control, 20dB Attenuator. Front panel switches select from two antennas inputs and outputs for two receivers. 9-18VDC or 110VAC with MFJ-1312. 5" x 2" x 6"..... **\$89⁹⁵**



► **MFJ-752C SSB/CW Audio Filter** Zero in and pull out stations from noise and interference. Peak, notch, low or high pass signals to eliminate heterodynes and interference. Filters tune 300-3000Hz, bandwidth varies from 40 Hz to almost flat, notches to 70dB, noise limiter. Switchable inputs for two radios. 9-18VDC or 110VAC with MFJ-1312. 10" w x 2" h x 6" d..... **\$94⁹⁵**

► **MFJ-722 SSB/CW Filter** Razor sharp switch-selectable SSB/CW filter. For CW: selectable bandwidths of 80, 110, 150 and 180Hz centered on 750Hz. For SSB: steep-skirted, 300-3000Hz filtering with tunable 70dB notch. Headphone jack, built-in speaker w/2W amp. 9-18VDC or 110VAC with MFJ-1312.... **\$74⁹⁵**

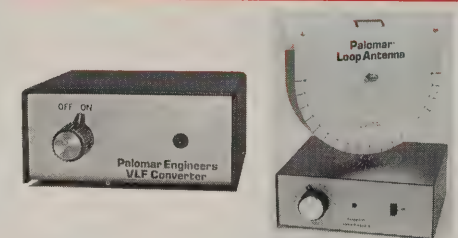
► **MFJ-956 LW/MW/SW Preselector/Tuner (left)** Greatly improves the reception of signals from 150kHz-30MHz. Tuning boosts signals while rejecting images, intermodulation, and other phantom signals. SO-239 connectors. 2" h x 3" w x 4" d..... **\$39⁹⁵**

► **MFJ-784 Super DSP Filter** Digital Signal Processing automatically eliminates heterodynes, reduces noise and interference on SSB/CW/AM, all digital modes, VHF, EME and satellite. Tunable FIR linear phase filters minimize ringing, prevent data errors, and have up to 60dB attenuation, just 75Hz away. Five tunable DSP filters, tune each lowpass, highpass, notch, and bandpass filter, including optimized SSB/CW filters. Vary bandwidth to pinpoint and eliminate interference. Five preset filters, and 10 programmable preset filters. Auto notch filter searches for, and eliminates multiple heterodynes. Noise reduction silences QRN. 2W audio amplifier/AGC. 12 VDC or 110VAC with MFJ-1315. 2 1/2" h x 9" w x 6" d..... **\$199⁹⁵**

► **MFJ-462B Multi-Reader** Copy RTTY, ASCII, CW and AMTOR signals from Amateur, Commercial, Military, Weather, Aero, Marine, Plugs into SW receiver phone jack, decodes and displays messages on a 2-line, 16 char. LCD display, 12VDC. 5 1/2" w x 2 1/2" h x 5 1/2" d..... **\$149⁹⁵**



► **AMECO TPA** Tunable Preamplifier and Active Antenna Covers 2 to 30 MHz in 5 bands A dual function receiver accessory, may be used with an outside antenna as a tunable preamplifier with more than 20dB gain and low noise figure, or as an effective indoor active antenna using the built-in 30" collapsible whip. Requires 9 VDC, or 110VAC with opt. PT-9T AC adapter. 2 1/2" h x 8" w x 6 1/2" d..... **\$69⁹⁵**



► **PALOMAR LA-1 LOOP Antenna (right)** Picks up less noise than other antennas. Frequency Range: VLF to 15MHz. Six plug-in loops for the various frequency ranges rotate and tilt to produce sharp nulls that cancel interference and noise. Built-in 20dB preamp compensates for small size. 2 1/2" h x 7 1/4" w x 6" d..... **\$99⁹⁵**

► **Plug-in Loops for:** 10-40kHz, 40-150kHz, 150-550kHz, 550-1600kHz, 1.6-5MHz or 5-15MHz range..... each **\$89⁹⁵**

► **PALOMAR VLF Converters (left)** Receives and converts the 10 to 500kHz VLF (Very Low Frequency) band to 80M. Two models allow tuning of this low range on a general coverage receiver or ham band transceiver. Requires 9V battery. 2" h x 4 1/4" w x 5" d

► **VLF-A** Ham Band only, use with a transceiver..... **\$79⁹⁵**
 ► **VLF-S** use with a General Coverage receiver..... **\$79⁹⁵**



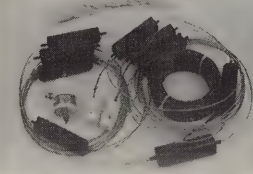
PALOMAR Receiver Preamplifiers (right)

Features same as above except for receiver only. Includes a two position antenna switch and switchable 20dB attenuator. Covers 1.6-54MHz, adds 20dB gain and additional selectivity.

► **P-405 (9 VDC)** **\$119⁹⁵ c/o** ► **P-408 (115 VAC)** **\$129⁹⁵ c/o**

► **PALOMAR PF-300 Audio Filter (left)** Connects between receiver and headphones or speaker. Provides 16th order low-pass for SSB and 16th order bandpass for CW and digital. Broad (250Hz), Medium (100Hz) and Sharp (45Hz) selection, variable 300-3000Hz. 5W audio output, requires 13.8V DC..... **\$139⁹⁵**

ANTENNA SUPERMARKET



EAVESDROPPER™

Shortwave Antenna Eight trap configuration provides reception of all Shortwave Bands, 11 to 90M. Includes Zap-Trapper® gas-tube lightning arrestor and 50 ft. of support rope. Overall length is 42 ft., comes assembled. When ordering, specify with 100 ft. of 72Ω twin lead, or weatherproofed SO-239 center connector for coaxial cable, (not supplied)..... **\$79⁹⁵**

specify with 100 ft. of 72Ω twin lead, or weatherproofed SO-239 center connector for coaxial cable, (not supplied)..... **\$79⁹⁵**



EAVESDROPPER™ SWL SLOPER Shortwave

Antenna End-fed, coil loaded with underslung parallel element. Mounts in a sloping configuration. Covers AM broadcast, 120 and 90M, and all Shortwave bands 7 to 13M. Overall 67

ft., comes fully assembled. Includes Zap-Trapper® lightning arrestor, SO-239 connector, and 50 ft. of nylon rope..... **\$79⁹⁵**

► **ALPHA DELTA SWL Sloper Antenna** Covers 13, 16, 18, 19, 21, 25, 31, 44, 49, 60, 90, and 120 meter shortwave bands, plus the AM broadcast band. Sloper design provides outstanding reception of low-angle DX signals. Multi-band transmit capability with an appropriate antenna tuner, handles up to 2000 watts. Overall length is 60 ft. requires 50Ω coaxial cable..... **DX-SWL \$69⁹⁵**

TIMEWAVE TECHNOLOGY INC.

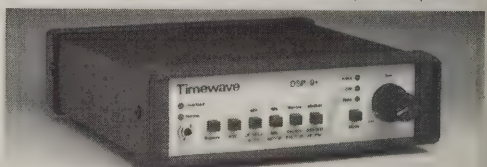
Noise Killer Filters

Advanced DSP Filters...

Improve reception by simultaneously reducing random noise, heterodynes, QRM and providing razor sharp audio for SSB/CW modes. The DSP filter features 3rd generation 16-bit processing and 16-bit DSP A/D and D/A chip. Processor runs at 13 million instructions per second allowing multiple functions at the same time. A must for the weak signals and noisy bands. Simple installation at receiver audio output, drives speakers or headphones directly.



► **DSP-9 Version 2.0 CW/SSB Filter** Push button selectable bandpass, automatic notch and random noise filters for SSB/CW and Data. SSB filter bandwidths: 1.6, 2.0, 2.4kHz, or 1.8, 2.4, 3.1 kHz, field programmable. CW filter bandwidths: 100, 200 and 500Hz with center frequencies of 600/750Hz or 400/500, field programmable. Reduces white noise, static, QRM, etc-dramatically! Excellent for HF and Satellite work. Self-test mode can be initiated by user. 12VDC @ 1A. 6" w x 6" d x 1 1/4" h, 2 lbs... **\$169⁹⁰**



► **DSP-9 Plus SSB/CW/Data Filters** Push button selectable bandpass, automatic notch and random noise filter for SSB/CW and Data. SSB filter bandwidths 1.6, 2.0, 2.4kHz or 1.8, 2A, 3.1 kHz, field programmable. CW filter bandwidths 100, 200, and 500 Hz with center frequencies of 400, 500, 600, 800 Hz; any two field programmable. Optimum data filter for HF Packet, GTOR®, AMTOR, and RTTY. ALL data modes have selectable center frequencies user programmable, default is USA std. 2210 Hz. AGC button for wider dynamic range, plus acts as an automatic CW boost/peaking enhancer. Aux audio output jack for data, PTT input for break-in. CW sidetone, bypass and muting. Relay passes audio directly to speaker with pushbutton bypass or power off, self-test. 12VDC- 1A. 6" w x 6" d x 1 1/4" h, 2.2 lbs **\$219⁹⁰**



► **DSP-59 Plus** Perfect for the Ham and SWL hobbyist. Features 225 combinations of high and low pass filters for voice and special modes. Over 300 CW and data filters (25 to 600Hz) allow the user to select almost any filter needed for a specific application, including RTTY, SSTV, AMTOR, G-TOR®, PACTOR, Packet, Satellite, EME, SSB, CW, Weather Fax and AM. Voice filters from 200 Hz (highpass). 13 CW center frequencies from 400 Hz. to 1.0 kHz on front panel. Push button selection of relay, bypass, AGC, HP/LP/BP, heterodyne elimination and random noise reduction. Kills heterodynes with notch up to 50dB. Dramatic random noise reduction from static, lightning crashes, white noise, line noise, etc. Marker for spotting the narrow CW filter, self-test mode. 12VDC @ 1A. 7 1/2" w x 8" d x 1 1/4" h, 2.2 lbs..... **\$299⁹⁰**



Passport to World Band Radio

A guide for Shortwave listening containing data on every international broadcast station; names, locations, frequencies, operating times, coverage, target area, transmit power, and more. A guide to hourly English language programs, worldwide. Includes comprehensive test reports on many shortwave receivers, and a Shortwave Buyer's Guide..... **ARR 250 \$19⁹⁵**

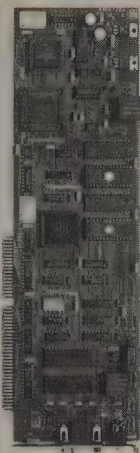


**Advanced
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Applications, Inc**



Exceptional Data Controllers for the Radio Amateur

PK-232MBX • PK-12 • PK-96 • DSP-2232 • DSP-1232
See separate AEA Digital page for complete
Product Descriptions Photos and Prices.

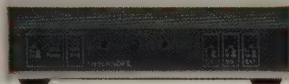


**HAL
COMMUNICATIONS
CORP.**

► **PCI-4000/M Multimode HF Modem.** A full-size 13 $\frac{1}{2}$ " DSP card for 386 or 486 PC's. Provides the best all-around performance on RTTY, AMTOR, PACTOR and CLOVER modes. Lets you work those signals that are just too weak for most other modes. The operating software for your PC is included and updates are available through the HAL Techline. Includes a phono connector cable to your radio system and a comprehensive technical manual. Third party software is available for specific operating requirements. One-year HAL warranty..... **\$699⁹⁵**

HAL TECHLINE: 217-367-5547

Data Radios



► **KANTRONICS D4-10** A high speed, wide bandwidth, UHF FM transceiver – a perfect match for the Data Engine or KPC-9612. Coupled with either TNC, the D4-10 can operate at speeds as high as 19,200 baud. Output is 10 watts. Two channels, crystals for 430.55 MHz installed, other frequencies are available by special order. 12 VDC. 1 $\frac{1}{4}$ "h x 6" w x 8" d, 2 lbs..... **\$339⁹⁵**



► **MFJ-8621 2 Meter Packet Only Data Radio.** A dedicated unit for high-performance packet through 9600 baud. Plug in TNC cable*, your antenna and power – your ready for error free packet; nothing to adjust. Crystals installed for 145.01 MHz. 5 watts output. 12 VDC @ 1 amp. 5" w x 5 $\frac{1}{2}$ " d x 1 $\frac{1}{2}$ " h **\$109⁹⁵**

*See Price list for pre-wired 8621-to-TNC cables. Crystals for other packet channels available thru MFJ, call 1-800-647-1800.



- The DIGITAL Communications Handbook (TAB633626).... **\$14⁹⁵**
- Your Gateway to PACKET Radio (ARR355)..... **12⁰⁰**
- Your PACKET Companion (ARR358)..... **8⁰⁰**



Kantronics

► **KANTRONICS KPC-3 Packet Communicator** This small, 1200 baud TNC is ideal for both new and experienced users. And now, the KPC-3 supports GPS operations and is APRS compatible. Requires so little power, it can run on a 9-volt battery, so it is perfectly suited for GPS and other portable applications. Available with either 32K or 128K RAM and can be controlled remotely. Includes two easy-to-use terminal programs for the PC. Supports terminal, Host, BBS, KISS (TCP/IP), and GPS modes. 6–25 VDC @ <45 mA. $\frac{3}{4}$ "h x 5 $\frac{1}{4}$ " w x 5 $\frac{1}{4}$ " d, 11 oz **\$119⁹⁵**

► **KPC-9612 Packet Communicator** As a dual-speed, dual-port TNC, the KPC-9612 can operate at both 9600 and 1200 baud at the same time (the 9600 baud port can be configured for 19,200 baud). With Kantronics' new optional K-Net networking EPROM, the KPC-9612 can operate as both a node and a TNC at the same time. It is available with either 32K or 128K RAM and can be controlled remotely. Includes two easy-to-use terminal programs for the PC. Supports terminal, Host, BBS, KISS and Multi-drop KISS. 6–25 VDC @ <45 mA. $\frac{3}{4}$ "h x 6 $\frac{1}{4}$ " w x 6 $\frac{1}{4}$ " d, 13 oz..... **\$199⁹⁵**

► **KAM Plus All Mode Communicator** Operates G-TOR™, Pactor, RTTY, CW, ASCII, and NAVTEX/AMTEX. Featuring two radio ports, it can operate any HF mode and VHF Packet at the same time. Has 128K battery-backed RAM (expandable to 512K) and a real-time clock. Also features "TOR Standby" for automatic link recognition in all TOR modes, dual level command set for beginners or veterans, and on-line helps. Uses standard shifts and programmable for any shift. Operates RS-232 or TTL. Includes two easy-to-use terminal programs for the PC. Supports terminal, Host, BBS, and KISS (TCP/IP). 12VDC @ <260mA. 1 $\frac{1}{4}$ "h x 6" w x 9" d, 2 $\frac{1}{2}$ lbs **CALL**

► **KPC-4 Packet Communicator** Contains two built-in 1200 baud modems for simultaneous operation, 32K of RAM, and the Kantronics KA-Node networking firmware. Ideal for a local packet switch! 12VDC @ <200 mA. 1 $\frac{1}{4}$ "h x 6" w x 9" d, 2 $\frac{1}{2}$ lbs..... **\$219⁹⁵**

► **Data Engine Dual port High-Speed TNC** May be configured with one or two modems and data rates up to 19,200 baud. With two modes installed, the Data Engine is capable of simultaneous operation on both ports. Standard firmware includes KA-Node for networking; G8BPQ and JNOS firmware are available via the factory BBS. Shipped with 64K of battery backed RAM and V40 processor running at 10MHz. Open Open architecture, developers manuals are available. 1 $\frac{1}{4}$ "h x 6" w x 9" d, 2 $\frac{1}{2}$ lbs **\$299⁹⁵**

► **KTU with Weathernode** Weather sensors attach to the KTU, the KTU attaches a TNC. Connect and request weather statistics, via packet. Temperature probe with 40 ft. cable included. Optional wind speed/direction sensor and rain gauge..... **\$229⁹⁵**

► **HOSTMASTER II™ Multi-mode Terminal Software.** Easy-to-use menu-driven programs designed to complement Kantronics TNCs. Use Hostmaster II+ for IBM-PC and compatibles or HOSTMASTER Mac for the Macintosh **\$69⁹⁵**

► **SuperFax II Multi-mode Terminal Software.** For Kantronics KAM or KPC series, ideal for WEFAX reception **\$49⁹⁵**

► **G-TOR™ The New Mode** A valuable collection of previously-published articles, a detailed description of the G-TOR protocol and informational numerous charts. Written primarily by Kantronics staff Phil Anderson, WØXI, Karl Medcaif, WK5M and others. 90 pages, soft cover **\$15⁹⁵**

MFJ



► **MFJ-1278B Multi-mode Data Controller (left/bot.)** Ten modes: PACTOR, 16-level FAX, Color, SSTV, PACKET, AMTOR, RTTY, ASCII, CW Navtex and Memory Keyer. Enhanced Mailbox, 32K System RAM, 16-gray level modem, 20 LED tuning indicator, Automatic Signal Analysis, MARS mode, sidetone amplifier, internal modem header, 10 user programmable message buffers, packet connect bell, dual radio ports, "Has Mail" LED indicator, KISS interface, Host mode, Threshold control, RS-232 and TTL ports. Fast start manual. 12 VDC, AC adapter included. 9 $\frac{1}{2}$ " x 9 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " **\$269⁹⁵**

► **MFJ-1278BT Turbo** (left (top) Same as MFJ-1278B above except Turbo version, includes a 2400 baud modem **\$339⁹⁵**

► **MFJ-1278B/DSP** Same as MFJ-1278B w/DSP filter **\$349⁹⁵**

► **MFJ-1270C TAPR TNC-2 Clone** Interfaces computer with RS-232 serial port and terminal program for VHF/UHF, OSCAR and other non-FM packet. Switchable HF/VHF modems. EasyMail™ personal mailbox, WeFAX reception. KISS interface for TCP/IP, 256K EPROM and 32K RAM. TTL serial port, battery memory back-up. AX.25/Level 2-version 2 software, hardware HDLC for full duplex, true data carrier detect for HF, multiple connects. Transceiver interface cable (less connector), TTL serial port connector and AC adapter supplied. 12 VDC. 9 $\frac{1}{2}$ " x 7 $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " **109⁹⁵**



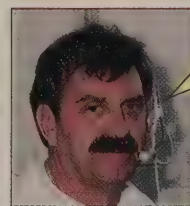
► **MFJ-1270CQ TAPR TNC-2 Clone** 9600 baud TNC **\$199⁹⁵**

► **MFJ-1276 TAPR TNC-2 Clone (right)** Same as 1270C but with PACTOR and 20 LED tuning indicator **\$149⁹⁵**



► **MFJ Starter Pack** • Computer interfacing cable, terminal software and instructions. Order MFJ-1282B Multi-Com disk or MFJ-1283 tape for C64/128/VIC-20. MFJ-1284 for IBM or compatibles or MFJ-1287 for Macintosh **See Price List**

► **MFJ-1289 Multicom Program for MFJ-1278B** • Supports color SSTV, 16-level FAX, packet picture. Menu driven, bursting with features - one key micro, call alert, auto router, auto parameters setting to TNC, text editor, 32K receiver buffer, and more! Complete with cable. (IBM 5-1/4") **\$59⁹⁵**



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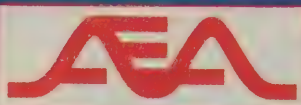
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MULTI-MODE DATA CONTROLLERS



Digital Signal Processors

DSP-2232
\$899⁹⁵

DSP-1232
\$699⁹⁵

The top of the line. These state-of-the-art controllers use digital signal processing (DSP) technology with the Motorola 56001 processor. Two Digital signal processors are built into the DSP-2232 for the ultimate in dual simultaneous ports. Full MailDrop facilities for packet, PACTOR & AMTOR Built-in software modems include all PK-232 modems, all satellite modems (400, 1200, 4800 and 9600 eq bps for PACSAT and OSCAR), 9600 bps K9NG / G3RUH, Analog FAX HF and APT, Analog SSTV, 2400 bps DPSK and much more! Dual Simultaneous ports let you gateway from packet to AMTOR, packet to PACTOR, and packet to packet. A multipurpose LCD display keeps you on top of all activity. PACTOR, Gateway, up/down Doppler shift for PSK modems, and up/down frequency stepping to control the radio's frequency have been added. Cables and connectors included. 12 VDC required. Single port on DSP-1232 & no LCD (fully upgradeable to DSP-2232). Limited Warranty.



Dual Simultaneous Radio Ports

PK-900
\$469⁹⁵

The best non-DSP multi-mode controller available. The PK-900 has all the modes and features as the PK-232, plus much more! Features dual simultaneous ports-Gateway from packet to AMTOR, packet to PACTOR, and packet to packet, even Gateway as a node. Allows Packet users connecting to Port 2 to monitor and link to other AMTOR, PACTOR and even packet stations using an HF radio on Port 1. Full MailDrop facilities for packet, PACTOR & AMTOR. Superior HF performance with the 8-pole Chebyshev bandpass filter and true DCD state machine. Memory ARQ for reduced errors. Large, easy to read LCD panel keeps you informed of all activity. TAPR disconnect modem header for other modems as they become available. Low-cost 9600 bps modem upgrade available. Gray scale/false color WeFax reception software available — AEA FAX III 900. Compatible with PC PakRatt for Windows 2.0. External AFSK adjustments for each radio port. Cables and connectors included. 12 VDC required. Limited one year warranty.



Dual Radio Ports

PK-232MBX

Call for Price!

The most popular multi-mode ever. The PK-232MBX features an RS-232 compatible controller for Packet (45 to 1200 bps and optional 2400 bps), AMTOR/SITOR, PACTOR, Baudot, ASCII RTTY, ARQ and FEC, Morse Code, WeFax, and Gateway. It receives NAVTEX / AMTEX and TDM. It has two radio ports which can be switched from buttons on the front panel. DCD threshold control on front panel. Includes Gateway as a node. Superior filter design (17-pole effective filtering) provides better HF performance; built-in 18K personal MailDrop with auto forwarding and reverse forwarding of messages; SIAM for automatic RTTY signal identification, KISS mode for TCP/IP compatibility; & HOST mode. Hardware HDLC & modem disconnect header. MailDrop facilities for packet, PACTOR & AMTOR. 21 front panel LEDs, external AFSK adjustment, scope out & CW key out jack. Compatible with PC PakRatt for Windows 2.0. Cables included. 12 VDC required. Limited one year warranty.

PACKET DATA CONTROLLERS



PK-96 9600 & 1200 bps Packet TNC

32K RAM (18K Mailbox): \$199⁹⁵

128K RAM (100K Mailbox): \$249⁹⁵

The PK-96, 9600/1200 bps packet TNC has 1200 bps AFSK tone signaling and 9600 bps K9NG and G3RUH compatible direct frequency modulation. True DCD state machine, hardware HDLC, modem disconnect header, Gateway firmware. Identifies TCP/IP, NET/ROM, and The Net stations. The Net X1J3 option available so the PK-96 can be a 1200 or 9600 bps component in a The Net system. Comes standard with 32K RAM (18K Mailbox), expandable to 128K RAM (100K). Full MailDrop facilities. Automatically receive and reverse forward messages. Comes standard with APRS™ Software. Comes standard with PC PakRatt Lite software, the packet-only, DOS control program. The PK-96 is compatible with PC PakRatt for Windows 2.0 and Log Windows 2.0. Great commands: EXPERT disable for beginners, KISS, PERSISTENCE, SLOTTIME, and CFROM/DFROM to select who may or may not connect. External TX adjustments for 1200 & 9600 bps, external RX audio. Limited one year warranty.



PK-12 1200 bps Packet TNC

32K RAM (15K Mailbox): \$119⁹⁵

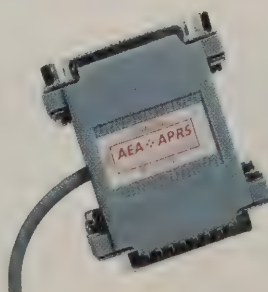
The PK-12 is AEA's low cost, 1200 bps, VHF/UHF, packet TNC. Global Positioning System firmware lets you transmit and receive position information with Automatic Packet Reporting System (APRS) Software included. This TNC can parse the GPS information itself so it can be used as a stand alone tracking device! The GPS firmware is GPS, Loran, ARNAV, and ULTIMETER II compatible. AEA's APRS Adapter Cable is also available and saves a COM port on your computer. Gateway firmware lets the PK-12 work as a node for faster throughput. The PK-12 comes standard with 32K RAM (15K Mailbox) and is easily expandable to 128K RAM (100K). The PK-12 includes AEA's HOST mode, an EXPERT disable command for beginners, and commands that let you choose who connects and digipeats through the TNC. Identifies TCP/IP, Net/ROM, and The Net stations. Comes standard with PC PakRatt Lite, the packet-only, DOS control program included with the PK-12. For even more control, the PK-12 is compatible with PC PakRatt for Windows 2.0. The PK-12 is perfect for base station use and full of features for mobile use — it's small, it's light, it can run on a 9-volt battery, and it has GPS commands — the ultimate mobile feature. Limited 1 year warranty.

Packet Software Included

PC PakRatt Lite and Automatic Packet Reporting System (APRS) software are included with purchase of the AEA PK-96 and PK-12.

PC PakRatt Lite is a Packet-only, DOS control program for the PK-96 and PK-12. Features include: on-screen, one-touch Help menu, full QSO logging, 900 line scroll-back buffer, complete macro facility. There are even five message/command buffers for pre-programming messages or commands for transmission with a single keystroke.

APRS software was developed by Bob Bruniga (WB4APR) for real time packet communications. This program contains a map of the world which can be scaled from .5 to 2000 miles. Use this program to map and track other APRS users whether they are mobile stations or base stations. Each station is given a symbol such as a car, boat, or house. You can even create maps of your own city by driving down the streets.



AEA's APRS Adapter Cable

Do you have enough COM ports for GPS applications? This handy cable allows any AEA TNC and GPS receiver to connect to just one computer COM port on your computer running APRS software. This is a great piece of equipment because having free COM ports is a luxury to most computer users. Laptop computers only have one COM port, so the adapter cable is a must for convenience..... \$30⁰⁰

See where all the Packet users are headed



APRS™ software included with PK-12



AEA PK-12

It is easy to see where Packet users are headed when you take a look at the PK-12, AEA's 1200 bps, VHF/UHF Packet TNC.

The GPS firmware and included Automatic Packet Reporting System (APRS™) software allow you to receive and transmit position information. The PK-12 is GPS, Loran, ARNAV, and ULTIMETER II compatible. If your computer has limited COM ports, get AEA's optional APRS Adapter Cable shown below and connect your GPS receiver and PK-12 to one COM port.

Gateway firmware lets the PK-12 work as a node for faster throughput and increased channel efficiency. Three users can use your PK-12 as a Gateway, you can communicate with another station, someone can be leaving you a message in your Mailbox, and others can be digipeating through your TNC—all at once.

Control is no problem. PC PakRatt Lite, the Packet-only, DOS control software comes standard with the PK-12. For even more control, use PC PakRatt for Windows 2.

Is mobile Packet radio your thing? The PK-12 is low priced, it's small, it's light, it can run on a 9-volt battery, and it does GPS—the ultimate mobile feature.

PK-12 FEATURES:

- GPS firmware
- 1200 bps VHF/UHF Packet
- Runs on a 9-volt battery
- Compatible with AEA Log Windows 2
- APRS™ software for GPS use included
- 15K Mailbox standard (32K RAM)
- Receive & reverse forward messages
- Optional APRS Adapter available
- Small, light, and energy efficient
- Standard 5-PIN DIN
- Special commands allow you to choose who connects to the PK-12
- Stand Alone Tracking—with a GPS receiver, radio, and PK-12, go mobile & let others track you
- Gateway firmware
- Low Price
- Special, easy command set for beginners
- Compatible with AEA PC PakRatt for Windows 2
- PC PakRatt Lite control software included
- Expandable to 100K Mailbox (128K RAM)
- Control third party traffic
- AEA HOST mode
- External TX Adjustment
- Limited One Year Warranty

If you're not using the PK-12, where are you headed? Experience the power and value of the PK-12. Call the AEA literature line at (800)

432-8873 for details. See your favorite amateur radio dealer for best pricing.



Optional APRS Adapter Cable lets you save a COM port on your computer when running APRS software.



Connect with us



Image received and colorized using AEA FAX III

Bad weather never looked so good.

The worse the weather gets, the better AEA FAX III is. This is because AEA FAX III allows you to colorize your received WeFax images, producing amazing full-color weather displays.

This IBM-compatible software receives HF SSB transmissions. Satellite maps and WeFax images are received in gray-scale and can be displayed in dazzling 256 pseudo-color like the one you see above. In addition to images, you'll be able to receive and decode Morse code, RTTY, and NAVTEX transmissions.

AEA FAX III's color enhancement lets you colorize maps and WeFax images however you want. See cloud formations and weather patterns that just can't be seen in gray-scale. Export your colorized images to PCX or GIF files for use in other applications.

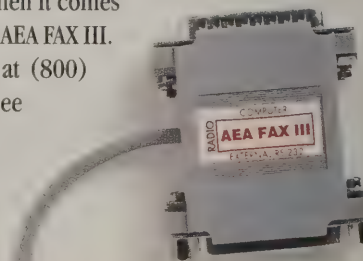
Choose schedules from the fax station database (included) and go do something else. AEA FAX III allows your computer to switch frequencies on your computer

controllable receiver, receive transmissions, and save them. When you come back you'll have images waiting for you. View the images you receive in the special slide show-mode.

AEA FAX III is easy to use right out of the box. Simply plug in the demodulator (shown here), install the software, and you're ready to receive highly detailed images. Tuning the signal is easy, AEA FAX III has an on-screen tuning indicator to help you keep the signal coming in clearly.

Don't be left out in the cold when it comes to high-tech weather reception, get AEA FAX III. Call AEA's Literature Request line at (800) 432-8873 for more information. See your favorite amateur radio

equipment dealer for best pricing.



Requires PC-compatible XT, AT, or better and a general coverage HF SSB receiver. VGA monitor required for gray-scale fax display and false-color.



Connect with us

HF & VHF

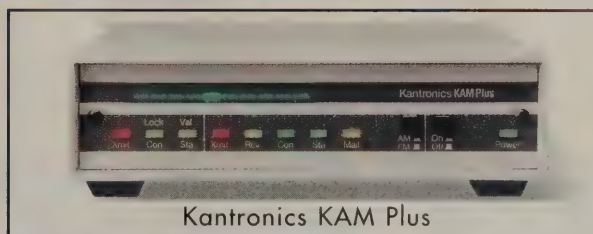
AT THE SAME TIME

The KAM Plus offers more performance than any other TNC in its price range. It can operate any of the popular HF modes (including the highly effective G-TOR mode) and VHF packet at the same time. The KAM Plus also provides more than 100K of personal mailbox space. And like other Kantronics TNCs, its design

is thoroughly contemporary; the KAM Plus is small and uses very little power. It also features remote access, so all KAM Plus commands are available from a remote location.

ENJOY THE

FLIGHT



Kantronics KAM Plus

Move up to the KAM Plus.
Isn't it time you spread your wings?

Kantronics

For more information, contact your
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Gives Wind, Temperature, Rain and Barometric Trend, Humidity, Dew Point, Alarms. Download and Graph Data on your PC - remote with Modem Interface. Central Junction Box for Easy Hook-up. Modular Design. Perfect for NOAA Weather Monitoring Stations.

► Model 7440

Barometric pressure from 26.00 to 32.00 in. of mercury (660 to 812 mm or 880 to 1084 mb). • Trend arrow shows if pressure is stable or increasing or decreasing • Alarm for change greater than .02, 0.4, or .06 inches of mercury.

HUMIDITY

Inside humidity from 10% to 90%. • Outside humidity optional, requires external humidity/temp sensor, below High and low humidity readings with time and date • Alarms for high/low humidities. • 1½" x 4½" LCD display. **\$349⁹⁵**

EXTERNAL HUMIDITY/TEMP SENSOR

Model 7859 Optional, allows the Model 7740 Weather Station to measure outside humidity, dew point and temperature. Comes with 40 ft. interconnecting cable **\$109⁹⁵**

For More WeatherSTAR options - See Price List

► Model 7425 - \$169⁹⁵

TEMPERATURE

Inside temperature from 32°F to 140°F (0°C to 60°C) • Outside temperature from 50°F to 140°F (-45°C to 60°C) • High and low temperatures with time and date • Alarms for high and low temperatures

WIND SPEED AND DIRECTION

Wind direction in 1° or 10° increments • Wind speed to 126 mph (203kph, 109 knots for 56.0 m/s) • High wind gust with time and date • Alarm for high wind speed

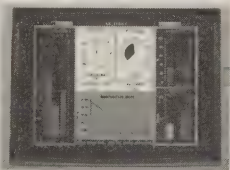
WIND CHILL FACTOR

Wind chill to -134°F (-92°C) • Low wind chill with time and date • Alarm for low wind chill

TIME AND DATE

12 or 24 hour • Time alarm • Date • ¾" x 3¼" LCD display

OPTION
► Model 7852 Rain collector Self dumping, monitors rainfall - daily and accumulated in 0.1" increments • Extension cables for anemometer or junction box **\$69⁹⁵**



► **WeatherSTAR Link Interface** Software, cable, serial port adapters to connect IBM compatibles to WeatherSTAR stations **7862 \$139⁹⁵**

TUNE BELT Handheld RadioBelt

With this unique belt you get an integrated pouch and belt for less than the cost of most carrying cases. Strap it on! - it's comfortable, convenient and protective; and is available in two sizes to fit virtually any handheld.



- **HH-1PS** Radio belt for up to 5" HT **\$16⁹⁵**
- **HH-1PM** Radio belt for up to 6" HT **16⁹⁵**
- **HH-1PL** Radio belt for up to 7" HT **16⁹⁵**
- **HH-2PM** Radio belt for up to 6" HT, w/batt pocket **17⁹⁵**
- **HH-2PL** Radio belt for up to 8" HT, w/batt pocket **17⁹⁵**



Case style may vary!

AES® IBM™ - Compatible PC

- ✓ Highest Quality, Maximum Performance
- ✓ Assembled in the U.S.A.
- ✓ American made parts used whenever possible.
- ✓ Two year Warranty on all components, No Extra Charge
- ✓ FCC Class-B Certified
- ✓ A True Plug and Play Computing Solution
- ✓ Slim, perfect for dedicated Packet Service
- ✓ Desktop for the user who wants more ... the all around computing solution!

Model AES 486DX66 • Call for Price

- Desktop Case - 7 Drive Bays
- VESA Local Bus Motherboard
- 486 DX33 CPU
- 4Mb High Speed RAM
- 340Mb Hard Disk
- VLB IDE/IO Card
- 1 Mb SVGA Video Card
- Keytronics 101 Key Ergonomic Keyboard
- DOS 6.2 and Windows 3.1
- 3.5 (1.44) and 5.25 (1.2) High Density Floppy Drives
- 28 SVGA Non-interlaced Monitor
- DOS 6.2 and Windows 3.1

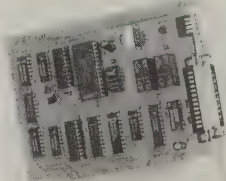
The Two Year Parts & Labor Limited Warranty is handled by:
ASC COMPUTERS of West Allis, WI

SEQUOIA Publishing



Pocket REF 460 pages, packed full of information for nearly every hobby. Chapters on air and gas, carpentry, chemistry, computers, electricity, math, hardware, plumbing, steel and materials surveying, welding and more. 100's of tables and charts, 3200 conversion factors. **\$9⁹⁵**

Pocket PCREF 320 pages, a comprehensive PC computer reference. ASCII Codes; Numeric Prefixes; Video Standards; Decimal/Hex Conversions; Printer Codes; PC Error Codes; I/O Interface Pinouts; PC Memory Maps; Address Maps; Modem Commands & Switch Settings; Keyboard Scan Codes; Floppy Drive Types; CPU Types; DOS History and more. **\$14⁹⁵**



UNIFIED Microsystems W9XT Contest Card for IBM™ PC and Compatible

► This 5" x 4½" plug-in card occupies a single 8-bit PC slot, does voice recording and play-

back, and CW keying. Enough memory to store a full 16 seconds of voice which can be partitioned between four messages of different lengths for playback on command. The microphone input is sampled at an 8-kHz rate resulting in audio that is of high quality and natural sounding. The card is non-volatile and does not use any disk space. On CW, the card frees up the PC port, and uses a relay which allows operation with positive or negative-keyed rigs. The W9XT Card works with all rigs and is compatible with popular logging programs. Stand alone support program is Low RF emissions - FCC Class-B certified. **\$139⁹⁵**

PERIPHEx

POWER PACKS for Longer QSOs

These Super Packs feature short circuit protection and overcharge protection, and a 12 month warranty. These and other models available for late model ICOM Handhelds.

- **BP-7S** 13.2V @ 1200mah **\$65⁰⁰**
- **BP-8S** 9.6V @ 1200mah **\$65⁰⁰**
- **BP-84S** 7.2V @ 1400mah **\$63⁰⁰**
- **BP-85S** 12V @ 800mah **\$76⁰⁰**



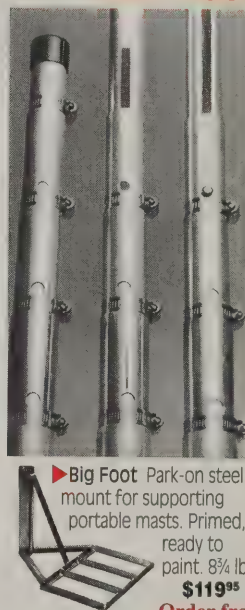
See Price List for other Models.

New Wave Antenna

PORTABLE Collapsible Masts

For portable or temporary antenna installations! These telescoping 7-section, 6063-T832 polished aircraft aluminum masts taper from 2" to 1¼" and are easily raised by one person at ground level in seconds. Each section joint has a 4" overlap and snaps into place. Rotates at any section along its length, or locked in place. Guy ring(s) included.

- **Adventurer** 47" to 12 feet **\$99⁹⁵**
- **Traveler** 59" to 19 feet **\$124⁹⁵**
- **Rover** 71" to 26 feet **\$149⁹⁵**
- **Expeditioner** 83" to 33 feet **\$174⁹⁵**
- **Explorer** 95" to 40 feet **\$199⁹⁵**



► **Big Foot** Park-on steel mount for supporting portable masts. Primed, ready to paint. 8½ lbs **\$119⁹⁵**

Order from Milwaukee only

BeI Merit Multimeters

Wide Range • Big, 2½" w x 1¼" h, 3½ digit LCD readout • **DM3000** has 8 functions and 24 ranges, **DM3050** has 10 functions and 27 ranges • 10M Ω input • Manual selection • AC: 750V • DC: 1000V • Ω to 20M • DC Current: to 20A • Capacitance to 20µF • Diode test • DM-3050 has continuity beeper and tests frequency test to 200kHz • 3½" w x 7½" h x 1½" d, 10½ oz. Set of test leads and 9 volt battery included.

► **DM-3000 \$54⁹⁵** • ► **DM-3050 \$59⁹⁵**



1995 ARRL Repeater Directory

Includes more than 20,000 listings for voice and digital repeaters and propagation beacons located in North, Central and South America. Lists more than 500 beacons from 14 to 24 GHz, band plans, tone chart, committees, clubs and more! Pocket sized... **ARR270 \$6⁰⁰**

EXTENDED PHONE HOURS: Monday-Friday call 1-800-558-0411 from 6 A.M. Pacific to 8:30 P.M. Eastern time

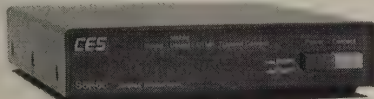
Telephone Interconnects ...

You can access your Home telephone line from your Mobile or Handheld by installing an **Interconnect Device** on your existing base station radio.

CES



► **SDI-50 Automatic Simplex Interconnect** Uses VOX-enhanced sampling, gives telephone phone access to handhelds and mobiles. Remotely programmable from any touch phone. Allows telephone-to-mobile signaling for selective calling. Automatic CW ID. Converts base stations to a remote station accessible from any telephone. AC adapter and cables are included. 14 1/2" w x 8 3/4" d x 1 1/2" h, 3 3/4 lbs **\$399⁹⁵**



► **SSI-68 Simplex Interconnect** For mobile applications, controlled by DTMF audio from mobile or telephone. Interface and software allows for operation with a wide variety of radio and telephone systems. VOX-enhanced sampling for optimum performance. Comes with telephone cable, computer interface and AC adapter. 8 1/2" w x 6 1/2" d x 1 1/4" h, 2 1/2 lbs **\$269⁹⁵**



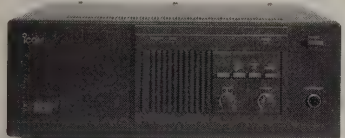
► **410 Personal Patch** An economy, easy to use basic interconnect. Does not have all of the user programmable features found in the higher priced CES telephone interconnects. 10-16V DC. 8 1/2" w x 6 1/2" d x 1 1/4" h, 2 1/2 lbs **\$169⁹⁵**

ICOM FM Repeaters



► **RP-1520 (2-meters)** Covers 144-148MHz FM with 25W output. Fully synthesized - no retuning after changing frequency. Features: User programmable call sign ID; Hang-up and time out timers; Manual transmit; DTMF decoder for remote control operation; Local inhibit function and CTCSS encoder; Excellent IMD attenuation. Sensitivity: <0.5uV for 12 dB SINAD. Built-in speaker and microphone connector. 117V AC or 13.8V DC. 16 1/4" w x 5 1/2" h x 14 1/2" d, 3 3/4 lbs **CALL**

► **RP-2210 (220 MHz)** Features are similar to RP-1520 shown above. Covers 220 to 225 MHz in 5 kHz tuning step increments with 25W output. CTCSS and hang-up timer are dip-switch programmable. EPROM programming for ID **CALL**



► **RP-4020 (440 MHz)** Similar to RP-1520/2210 except for different appearance. Covers 430 to 450 MHz with 25W output. The DTMF code includes a 4-digit password to prevent undesired remote control access **CLOSEOUT \$1899⁰⁰**

► **RP-4020/50W (440 MHz)** 50W output **CALL**

► **RP-1220 (1.2 GHz)** Similar to ICOM repeaters above. Synthesized, covers 1240 to 1300 MHz with 10W (high) or 1W (low) output. Battery back-up connector. Most functions can be remotely controlled using DTMF codes **CALL**

Connect Systems, Inc.

STANDARD FEATURES (all models): Built-in programming Keyboard and Digital display • Redial • Single or multi-digit access codes • Secret toll override access code • Toll Restrict • Regenerated tone or pulse dialout • Ringout on 1 to 9 ring Line in use detect • Call waiting • CW ID • Hookflash • and More!



► **Private Patch V** Top-of-the line! - a user programmable multi-mode interconnect that can operate the following modes: Enhanced Sampling, VOX Simplex, Semi-Duplex and Repeater Maker. These modes allow flexible future use. Ninety memory speed-dialer and remote base mode, included. Connects to the microphone and speaker jacks of any simplex transceiver for VOX simplex operation; other modes require internal connections. 12V DC. 11 1/8" w x 7 3/8" d x 1 1/8" h, 3 1/2 lbs **\$419⁹⁵**

► **9801 Electronic Voice Delay (EVD) Option** Provides a full 1/2-second of delayed telephone audio to eliminate word clipping caused by slow switching radios. For use with the Private Patch V in the VOX mode only **\$129⁹⁵**



► **CS-700 Intelligent Interconnect** For Simplex operation, Offering selectable VOX Enhanced or VOX Controlled sampling which allows the mobile operator to have positive control at all times. Requires a simple internal connection to the discriminator of your simplex transceiver. Nine memory speed-dialer is standard. 12VDC. 6 1/2" w x 7 1/2" d x 1 1/8" h, 2 1/2 lbs **\$349⁹⁵**

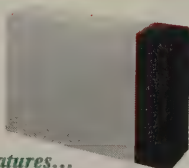


► **CS-800 Full Duplex Interconnect** Operates full or half duplex, and also has a built-in Repeater Maker that allows you to turn your radio into a powerful repeater system. Use with any dual bander transceiver or connect to your existing repeater for Full Duplex patch. A ninety memory Speed Dialer is standard. 12V DC. 6 1/2" w x 7 1/2" d x 1 1/8" h, 2 1/2 lbs **\$349⁹⁵**



through any remotely located repeater. The standard 1/2-second Electronic Voice Delay totally eliminates syllable or word clipping and results in outstanding simplex performance. Ninety memory Speed-dialer and Remote base mode included. Only connections are to the microphone and speaker jacks of your transceiver. 12VDC. 6 1/2" w x 7 1/2" d x 1 1/8" h, 2 1/2 lbs **\$349⁹⁵**

► **CS-900 Control Station Interconnect** Voice activated, can be used simplex or



**YAESU
FM Repeaters
(VHF) 135-175MHz
(UHF) 400-512MHz**

Call for Prices

Features...

- 25 Watt Continuous Duty Power
- 8 Channels • PLL Synthesized
- 110/220 VAC or 13.8 VDC @ 6A
- CTCSS Encode/Decode included
- Repeater/Base Sta. Operation
- Fully Programmable Functions including Hang-Up Time and Time-out Timer • Options

- Wall Mountable or fits in a Standard 19 inch Rack
- DB-25 Connector for Accessory and 8-PIN Modular Jack for Telephone Line.
- Modular Card Style Unit Construction • E-Z Open Cabinet
- 14 3/4" x 10 3/4" x 4 3/4", 25 1/2 lbs

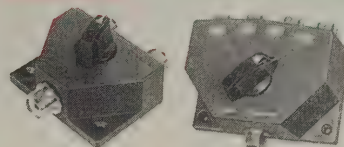
RF Products

Improve mobile HT performance! Get the RF outside of the vehicle. Simply attach the rubber duck antenna from your HT to this handy magnetic mount and place it outside, on the roof or trunk, where it can radiate without obstruction.

► **199-416** accepts BNC connector, with 10 ft. coax and BNC **\$17⁹⁵**



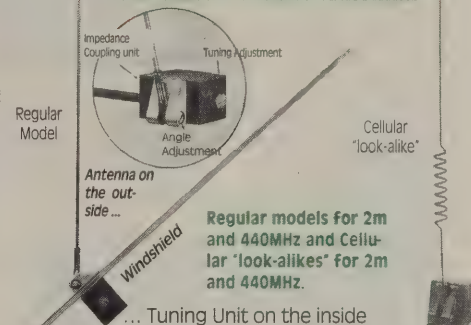
DAIWA Coaxial Switches



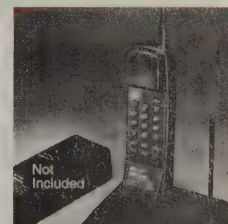
► **CS-201 Two position Coax Switch (left)** Cavity construction for low VSWR, less than 0.2dB insertion loss and 60dB isolation up to 600MHz. 2.5KW PEP or 1KW CW. SO-239 connectors, the unused terminal is always grounded for protection **\$25⁹⁵**

► **CS-401 Four position Coax Switch (right)** Cavity construction for low VSWR, less than 0.2dB insertion loss and 60dB isolation up to 800MHz. 2.5KW PEP or 1KW CW. SO-239 connectors, unused terminals are always grounded **\$109⁹⁵**

Antenna Specialists "On-Glass" Mobile Antennas



► **No holes!** ... The small tuning unit attaches to the glass inside the vehicle, and couples capacitively thru-the-glass to a full 1/2 wavelength element mounted on the outside. Installs with DUOBOND™ adhesive that holds fast but is easily removed without damage. Rated for 100 watts. Includes adhesive, 15 ft. of coax and PL-259 connector **See ASP in the Price List.**



**Cobra®
CORDLESS
TELEPHONES**

► **CP-706 (left)** This Patented Cobra INTENNA® 46/49MHz cordless phone has built-in base and handset antennas for extra convenience, 10 Channel Scanning for quality & performance and Automatic Voice Scrambling to provide complete calling privacy, prevents eavesdropping. Compander Noise Reduction; Page/Find Button; Battery Saver Circuit; Last Number Redial; Flash Button; Digital Security Codes; Tone/Pulse Dialing; Hearing Aid Compatible. Ivory color, 9 1/2" l x 5" w x 3 1/2" d, 1 lb. **\$89⁹⁵**

► **CP-912 (right)** A 900MHz Digital Spread Spectrum cordless phone. Provides substantially Longer Range and Exceptional Clarity over 46/49MHz models. Total Privacy and No Interference is realized by digitally encoding and randomly spreading conversations over 100 channels in the 900MHz range. Page/Find Button; Last Number Redial; One-Touch Emergency Dial; Battery Saver; Tone/Pulse Dialing; Receiver Volume Control; Hearing Aid Compatible. 9 1/2" l x 6" w x 4 1/4" d, 2 1/2 lb. **\$269⁹⁵**

"Hi! ... I'm Paul, W9KHO
let's talk Repeaters"
1-800-558-0411

The Quad Antenna

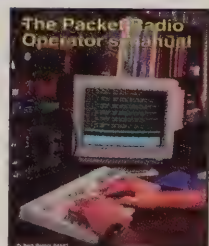
Hams love antenna books and this book is no exception. Written by world renowned author Bob Haviland, W4MB, *The Quad Antenna* is the authoritative technical book on the design, construction, characteristics and applications of Quad Antennas. Discover how to easily build a quad antenna for your station that will help you fill your log-book with rare DX that you have only dreamed about before.



\$15.95

The Packet Radio Operator's Manual

This book is written by CQ columnist and Amateur Radio Packet authority Buck Rogers, K4ABT. An all new introduction and guide to packet operation, it is the perfect single source, whether you're an advanced user or just starting out. Learn about packet radio without all the technical jargon. Also included are detailed hookups for dozens of radio/packet controller/computer combinations, making this book the definitive resource for the active packet user.



\$15.95

The VHF "How To" Book

Discover the perfect operating guide for both the new and experienced VHF enthusiast. Developed by CQ VHF Columnist, Joe Lynch, N6CL, this book is the ideal reference tool for all phases of VHF operating. Learn more about packet, EME, satellite, ATV, and repeater operation.



\$15.95

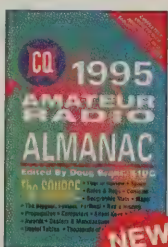
The Vertical Antenna Handbook

Take advantage of the 20 years of research and practical experience of naval communications engineer Capt. Paul H. Lee, USN(ret), N6PL. Learn the basic theory, design, and practice of the vertical antenna. Discover easy construction projects such as a four-band DX vertical or a broadband array for 80 meters. Ever wonder how to build a functional directive vertical system? Paul Lee can get you started today!

\$9.95

1995 CQ Amateur Radio Almanac, 2nd Edition

If you're looking for information about ham radio, it's in the *1995 Amateur Radio Almanac*. This Sourcebook is filled with over 500 pages of facts, tables, graphs, maps, and other information in an easy-to-read format. Here's just a sample of what's new this year: Amateur Radio Around the World, Expanded Coverage of Internet Computer Services for Hams, New General Class License Question Pool, and Amateur Radio Club Listings. The list goes on!



\$15.95

Get Started with CQ's New Video Library!

Getting Started in Contesting

For the newcomer to contesting or an experienced veteran, this video is for you! You'll get advice and operating tips from some of contesting's most successful competitors. Here's just a sample of what you'll see: what contesting's all about, tips for beginners, how to compete from a small station, operating secrets from the "pros", live QSOs from world class stations, VHF/UHF contesting.



\$19.95

Getting Started in Ham Radio

This is a fast-paced video introduction to the fascinating world of ham radio. CQ's experts show how to select equipment and antennas; which bands to use; how to use repeater stations for improved VHF coverage; the importance of grounding and the basics of soldering. Get the most out of your station, whether it's home-based, mobile or hand-held.



\$19.95

Getting Started in VHF

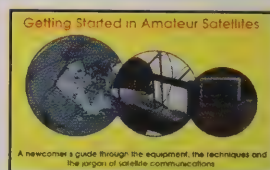
This is the ideal introduction to operating on VHF. See demonstrations of the latest radios. Also, learn about repeater usage as well as the more exotic VHF operating modes. Whether you are interested in packet radio, satellite operation, or using your local repeater, this is your video!



\$19.95

Getting Started in Amateur Satellites

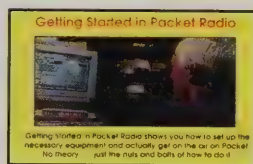
Learn how veteran operators set up their satellite stations. Learn how to locate and track ham satellites with ease. Watch operators access satellites and contact far ranging countries around the world. This video is filled with easy to understand advice and tips.



\$19.95

Getting Started in Packet Radio

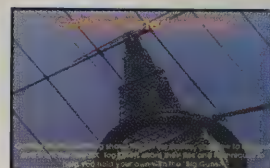
This video will help de-mystify the fascinating but sometimes confusing world of packet radio. Learn how to get started using your computer on the radio. Included are step-by-step instructions on making packet contacts and using packet bulletin boards, networks and satellites.



\$19.95

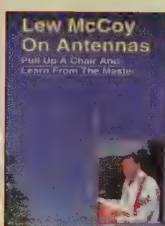
Getting Started in DXing

Top DXers share their experience with equipment, antennas, operating skills, and QSLing. You'll see hams work rare DX around the world. All this valuable information may well give you the competitive DX edge.



\$19.95

New Books From CQ



McCoy on Antennas

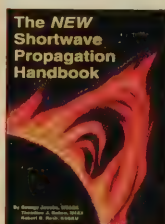
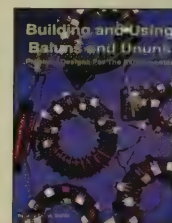
CQ magazine author and acclaimed authority on antenna theory and design, Lew McCoy, W1ICP, has written a truly unique antenna book that's a must for every amateur. Unlike many technical publications, Lew presents his invaluable information in a casual, non-intimidating way. It's not just an antenna handbook, but a wealth of practical antenna advice for the ham!

\$15.95

Building and Using Baluns and Ununs

Written by world-renowned expert Jerry Sevick, W2FMI, this volume is the definitive source for his latest practical information and designs on transmission line transformer theory. W2FMI has unraveled the technological mysteries with designs that are simple and work. Discover new applications for dipoles, yagis, log periodics, beverages, antenna tuners, and countless other examples.

\$19.95



The NEW Shortwave Propagation Handbook

CQ has been a leader for nearly 50 years in providing timely and invaluable information on HF propagation. Thousands of radio amateurs were helped by our first propagation handbook. Now, you can take advantage of the information and techniques presented in this completely updated and revised volume. It's certain to be one of ham radio's classics—and one that will immediately increase your enjoyment of the HF spectrum.

\$19.95

Order Your CQ Products From AES Today!
Toll-Free 1-800-558-0411



► **DJ-180T** 2 Meter **HANDHELD** Simple, intuitive operation makes it easy to operate so it's not necessary to spend hours studying the instruction manual. Large 16-digit DTMF pad, highly visible illuminated LCD display. Covers 144-148MHz transmit/130-174 MHz receive. 10 multi-function memory channels including one Call channel-can be upgraded to 50 or 200 channels with optional plug-in chips stores all operating parameters including odd splits (0-15.995MHz). Output: 2.0W with standard 7.2V-700 mAh battery; 5W with optional battery or 13.8V. CTCSS encode and decode are standard. Automatic power off, low battery indicator. 5.3" h x 2.3" w x 1.3" d, 0.77 lbs.

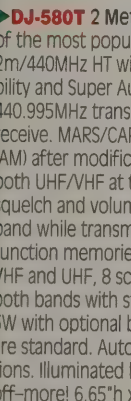
- Model **DJ-180TH** is 5 watts with a 12V-700 mAh battery standard.



► **DJ-F1T** 2 Meter **MINI HANDHELD** Covers 144-148MHz transmit/138-174 MHz receive, also 118-136MHz (AM) receive with modification-programmable VFO range. 40 multi-function memory channels including Call one channel, 8 scanning modes, priority function (dual watch). Output: 2.0W with standard 7.2V-700 mAh battery; 5W with optional battery or 13.8V. Pager and code squelch, optional VOX operation. CTCSS DTMF encode and decode are standard. Illuminated DTMF keypad, autodialer, battery saver. 4.3" h x 2.1" w x 1.5" d, 14 oz. • The Model **DJ-F1T/HP** is 5 watts with a 12V-600mah battery standard.



► **DJ-G1T** 2 Meter **HANDHELD w/"Channel Scope"** Monitor 7 different memory channels simultaneously! The over-sized display shows seven bar-graphs, each assignable to an independent memory channel. If one or more memory channels becomes active, it shows on the corresponding bar-graph lets you know-relative signal strength too. The display can also show activity on the entire band in 5, 10, 12.5, 15, 20, 25, 30 or 50KHz steps-like a spectrum analyzer. Covers 144-148MHz plus 440-449.995MHz receive only (cross-band semi-duplex operation). Also, 118-136 (AM) aircraft receive. Output: 2.0W with standard 7.2V-700 mAh battery; 5W with opt. battery or 13.8V. 80 multi-function memory channels (odd splits on all), 6 scan modes, 5 autodialer memories. CTCSS encode standard, DSQ for private paging, great audio, and more! 5" h x 2" w x 1.75" d, weighs only 13 oz.



► **DJ-580T** 2 Meter **TWINBAND HANDHELD** One of the most popular, ever! A super-compact 2m/440MHz HT with full-duplex cross-band capability and Super Audio! Covers 144-148/440-440.995MHz transmit and 130-174/410-470MHz receive. MARS/CAP transmit and 118-136MHz (AM) after modification. Simultaneous receive on both UHF/VHF at the same time using separate squelch and volume controls-also receive on one band while transmitting on the other. 40 multi-function memories-intermix any combination of VHF and UHF, 8 scan modes. Output: 2.0W on both bands with standard 7.2V-700 mAh battery; 5W with optional battery or 13.8V. CTCSS encode and decode are standard. Autodialer, DTMF code squelch and paging functions. Illuminated keypad, battery saver automatic power off-more! 6.65" h x 2.24" w x 1.23" d, 0.97 lbs.



► **DJ-582T** VHF/UHF **Handheld** Has the same standard features as the popular DJ-580T, plus these new additional features: Bigger bold keypad buttons; Easier to grasp control knobs; Accelerated scan speed; Bright red TX LED for positive transmit indication; Channels Display.

► **DJ-480T** UHF **FM Handheld** Features similar design, and offers simple program as found in the DJ-180T.

See page 2 for accessories...
Call for Prices on major items



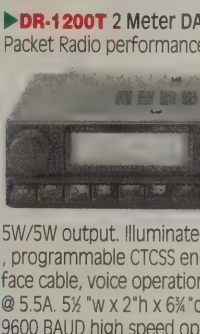
► **DR-130T** 2 Meter **MOBILE** 50/5W output. Covers 144-148MHz transmit/140-174MHz receive. 20 multi-function memory channels-upgrades to 100 with optional plug-in chip. four scan modes. Large LCD with choice of frequency or channel display. 50 tone CTCSS encode and optional decode. Timeout timer (30-450 sec.), clone capability. DTMF microphone with UP/DOWN buttons and DTMF encoder. 13.8V @ 9.5A. 5 1/2" w x 1 1/2" h x 6" d, 2 1/2 lbs • Model **DR-430T** is 440MHz, 35W version.



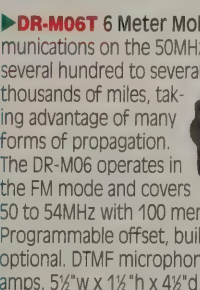
► **DR-150T** VHF **FM MOBILE** 50/10W output. Covers 144 to 148MHz transmit with 108-174MHz and 440-450MHz AM, FM receive. Two separate VFOs, frequency or channel display mode. 100 memory channels with additional call channel and program scan memories, multiple scan modes. Channel Scope feature, LITZ function, 9600bps/phone patch interface, auto dialer, DSQ functions, 50 tone CTCSS tone encoder, DTMF encode/decode, cloning function, timeout timer. Remote control with included DTMF microphone. 13.8V @ 10A. 5 1/2" w x 1 1/2" h x 5" d, 2 1/2 lbs



► **DR-600TB** 2m/70cm **TWINBAND MOBILE** Two radios in one! Rugged, wide coverage, and high-tech features, suitable as a mobile or base. Covers 144-148/440-450MHz transmit and 150-173/410-470MHz receive. Modifiable for 118-136MHz (AM) aircraft band receive and MARS/CAP transmit. Dual watch, full duplex cross band operation, with independent controls for each band. 28 multi-function memory channels, multi-function scanning. Output: 45W (2m)/35W (440MHz). Optional kit allows separation of front panel from the transceiver for custom install, remote control possible from any DTMF capable 2m or 70cm transceiver. CTCSS encode and optional decode, separate VHF/UHF outputs. Remote control microphone allows control of a number of functions. Large dual LCD display. 13.8V @ 10A. 5 1/2" w x 2" h x 7" d, 3 1/2 lbs.



► **DR-1200T** 2 Meter **DATA RADIO** Engineered for optimum Packet Radio performance and operating convenience. Supports 1200/2400 BAUD, modifiable to 9600. Covers 144-148MHz with 5, 10, 12.5, 15, 20 and 25KHz resolution. 14 multi-function memory channels, 4 scanning modes. 5W/5W output. Illuminated LCD display with function indicators, programmable CTCSS encode and decode. Includes TNC interface cable, voice operation requires optional microphone. 13.8V @ 5.5A. 5 1/2" w x 2" h x 6" d, 2.2 lbs. Model **DR-1200TH2** supports 9600 BAUD high speed operation.



► **DR-M06T** 6 Meter **Mobile Transceiver** Find exciting communications on the 50MHz band. Working DX is possible over several hundred to several thousands of miles, taking advantage of many forms of propagation. The DR-M06 operates in the FM mode and covers 50 to 54MHz with 100 memory channels and 10/1 watt output. Programmable offset, built-in 50 tone encoder with decoder optional. DTMF microphone included. Requires 13.8V DC at 3 amps. 5 1/2" w x 1 1/2" h x 4 1/2" d, 760g.



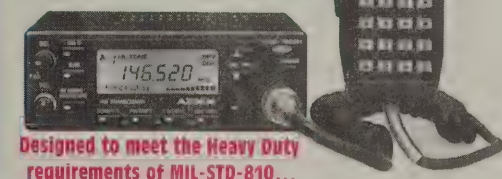
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AZDEN® 2, 6 & 10 Meter Handhelds

- ★ Heavy duty commercial grade construction designed to meet MIL-STD-810 provides exceptional ruggedness and weather resistance. 2 year limited warranty.
- ★ 5 Watt battery standard on all models.
- ★ Backlit LCD (liquid display)
- ★ Memories: 40 in 2 banks, plus 1 temporary.
- ★ DTMF Pager and Code Squelch
- ★ DTMF Telephone Memory: (7 numbers AZ-21A only)
- ★ Scan Memory Skip
- ★ Auto Power Shut-Off
- ★ Battery Power Saver: Approximately 28 mA in Save Mode
- ★ Dimensions: 6 1/2" h x 2 1/2" w x 1 1/2" h
- ★ Weight: Approx. 1 lb.
- ★ TRANSMITTER: High Power 5 Watts; Low Power 0.5 Watts

- **Model AZ-21A** 2-meters; 144-148MHz transmit, 136-174MHz FM plus 118-135.995 MHz AM receive ... **\$299⁹⁵**
- **Model AZ-61** 6-meters; 50-54MHz FM transmit, 46-54 MHz FM receive. **\$379⁹⁵**
- **Model AZ-11** 10-meters; 28-29.7MHz FM transmit, 28-29.995MHz receive **\$379⁹⁵**

AZDEN® 2, 6, 10 Meter 220 & 440MHz Mobiles



Designed to meet the Heavy Duty requirements of MIL-STD-810...

- | | |
|--------------------------------------|--|
| ★ C-MOS microcomputer control | ★ 20 channel memory |
| ★ Wide frequency coverage | ★ Keyboard up/down frequency selection |
| ★ Adjustable output power | ★ Feather-touch keyboard |
| ★ Large amber backlit display | ★ Independent on/off power-switch |
| ★ 20 channel memory | ★ Lithium battery back-up |
| ★ Priority channel | ★ Multi-function microphone |
| ★ Repeater reverse | ★ Optional tone squelch decoder unit |
| ★ Offset | ★ 2" h x 5.5" w x 7.25" d |
| ★ Programmable frequency step | |
| ★ Built-in programmable tone encoder | |
- **PCS-7000H** 2-meters; 144-148MHz transmit, 136-174MHz FM plus 118-135.995 MHz AM receive, 50/10W **\$334⁹⁵**
 - **PCS-7500H** 6-meters; 50-54MHz FM transmit, 46-54 MHz FM receive, 50/5 watts. **\$389⁹⁵**
 - **PCS-7800H** 10-meters; 28-29.7MHz FM transmit, 28-29.995MHz receive, 50/5 watts. **\$389⁹⁵**
 - **PCS-7200** 220MHz; 215-230MHz FM, 25/5W **\$409⁹⁵**
 - **PCS-7300H** 440MHz; 420-470MHz FM, 35/5W **\$439⁹⁵**
 - **New! PCS-9600D** 440MHz; 430-450MHz FM, 35/10W. A 9600 baud data radio. Plug & play from from panel. **\$649⁹⁵**

AZDEN Headphones

- The **DM-10** (top) and the **HS-03** with Boom Microphone (bottom) have been specifically designed to enhance voice reception and transmission. The lightweight, soft ear pads and adjustable headband permit long hours of use. The earphones on both models have a 20Ω impedance and a 200-5000Hz response with a 6dB rise at 2400Hz, 1/4" phone plug is supplied.
- The dynamic boom microphone on the **HS-03** features a 500Ω impedance and a 300-4000Hz response with a 6dB rise at 2500Hz. 8-pin connector is supplied. **DM-10 \$49⁹⁵ • HS-03 \$69⁹⁵**

NEW DX-70T

NOW THE EXCITEMENT REALLY BEGINS!

Enter a completely new dimension in HF enjoyment with the hottest transceiver today: Alinco's DX-70T. This incredibly compact 100 watt delight is priced comparable to its size, yet loaded with today's most wanted features, including all-mode 6 meter operation. It is the perfect new rig for newcomers, pros and everyone demanding top value in a go-anywhere, do-it-all transceiver. Alinco's DX-70T is ready to go where you go---do what you do, and proudly tell the world about it! Now this is hamming!

Features Galore!

The DX-70T operates 160 through 6 meters, includes general coverage reception, dual VFOs, 100 tunable memories, and 38 CTCSS tones for 6 and 10 meter FMing. It also has IF shift, wide and narrow CW filters, selectable semi and full CW break-in, RF preamp, attenuator and high performance noise blanker---all built in! Alinco's DX-70T puts you on top of all the action!

A Mobile Treat!

The DX-70T fits in the smallest space, and its removable front panel can be mounted right on your auto's dash or console for a custom installation. It has a large tuning knob plus a separate multi-function sub tuning knob with 100KHz steps for quick and easy frequency shifts.

Enjoy With Confidence!

The easy-to-operate DX-70T is an outstanding performer, exceptionally reliable and backed with a full one year warranty. Your total enjoyment is guaranteed!

Features

- * Frequency Range
 - 160-6meters(Tx)
 - 150 KHz-30MHz, 50-54MHz(Rx)
- * Power Output:
 - 1.8-30MHz SSB, CW, FM: 100 watts (50 watts low, 40watts AM)
 - 50-54 MHz: SSB, CW
 - FM: 10 watts (4watts AM)
- * Dual VFOs
- * 100 tunable memory channels
- * Semi and full CW break-in
- * Wide and narrow/500Hz CW filters included
- * Separate RIT and TXIT controls (± 1.4 KHz)
- * Auto SSB mode select W/override
- * 38 CTCSS tones for deluxe FMing
- * Noise Blanker
- * Selectable RF preamp and attenuator
- * Subdial for bands, memories, tuning
- * World's smallest 100w HF xcvt: 2.25 x 7 x 9 inches(H.W.D.)
- * Weight 6.2 lbs.
- * DC cable, mic included
- * Optional 5 ft. remote cable
- * Optional mobile mount bracket
- * Optional manual antenna tuner

This device has not been approved by the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased until the approval of the FCC has been obtained.



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DR-150T

FULL ACCESS MOVES YOU AHEAD

Engineered for Satisfaction. Alinco's DR-150T sets a new industry standard for 2 meter mobiles, featuring up-to-the-minute technology and a full-powered 50 watts.

So advanced and yet so simple to use, the DR-150T will more than satisfy the needs of beginners and Ham veterans alike.

Channel Scope Sweep Scan

Enjoy visual scanning capability of multiple frequencies along with simultaneous receive audio!!!

While in the channel scope mode, activate the scan function and quickly access only those frequencies that show a strong signal indication. The DR-150T's "S-meter" squelch control has 8 adjustable settings for custom operation. With the DR-150's built-in band scan, program scan and memory scan modes, the radio may be set to stop on either a busy or a vacant channel. Also, the DR-150T gives you a visual display confirming the direction of the scan, a feature which adds to the overall user friendly construction that this rig has to offer.

New Safety Dialer

Alinco has specially designed the DR-150T for mobile-safe operation. The new Safety Dialer feature enables the operator with complete control of auto dial transmissions simply with the equipped remote mic. Depressing the PTT in conjunction with either the up/down buttons gives you simple and direct access preventing any distraction while driving.

NEW



Size: 5-1/2" W x 1-9/16 H" x 6" D

Features

- * Frequency Range
- * Receive: 108.000 – 173.995 MHz (AM, FM)
440.000 – 449.995 MHz (FM)
- Transmit: 144.000 – 147.995 MHz (FM)
- * Power Output
High: 50 W, Medium: 25 W, Low: 10W
- * Remote Control by Microphone
- ✓ Channel Scope (Visual Search)
- * Various Scan Modes
- * 100 Memory Channels plus 1 Call Channel Memory, 1 Program Scan frequency Memory
- ✓ LITZ Function Capability (The US First Emergency Alert Monitoring Feature)
- * S meter Squelch Function
- * Tone Burst Function
- * Built in RF attenuator
- * Built in 9600 bps/Phone Patch Interface
- * Built in Tone Encoder (50 Tones)
- ✓ Safety Dialer (5 memory channels)
- * DSQ Function
- * Direct Frequency Entry from the DTMF microphone
- * DTMF tone decoder
- * 2 VFO's (A&B)
- * TOT (Time Out Timer)
- * Channel Display
- * Tone Scan Function
- * Air Clone
- * Cable Clone

✓ **NEW INNOVATIVE FEATURES**



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NEW DR-610T

SIMPLY MOBILE

The New Alinco DR-610T Dual Band Mobile Transceiver

Designed for convenience. The DR-610T's Channel Scope gives you visual monitoring capability to keep you engaged in local frequency activities. A built-in duplexer and a new remote mount system provide you with flexible installation options with a readily detachable front head, and the optional EDS-1 accessory junction box containing both separate microphone and external speaker jacks.

Multi-Color Control Panel Display

A color-coded sequence of green and amber lights controlled by the function button illuminates the DR-610T's control panel indicating a change in your operational setting. The DR-610T clearly outshines the competition by giving you simple and direct access to complex dual band applications.

Efficient Memory Storage with a "5 Bank System"

The 120 memory channels that come standard with this new dual-bander are conveniently divided into 5 separate memory banks for Hams who traverse through multiple operating areas. Program up to a total of 240 channels with the optional Alinco accessory EJ-23U memory unit.

LITZ Emergency Alert System

To activate the Long Tone Zero (LITZ) emergency alert system, a repeater controller presses the touch tone "0" on his or her mic for a period longer than 3 seconds. The repeater will re-transmit this DTMF tone which will be decoded by the DR-610T's special LITZ decoder. A beep sound emits from the speaker repeatedly and the "Lit" icon will appear in the display until the station operator depresses any of the control panel keys.

Features

- * Frequency Range
- * Receive: 108.000 - 173.995 MHz (AM, FM)
420.000 - 470.000 MHz (FM)
- * Transmit: 144.000 - 147.995 MHz (FM)
438.000 - 449.995 MHz (FM)
- * Multiple Scan Functions
- * Priority Function
- * Mono Band Dual Receive (VxV) (UxU)
- * 5 Channel Scope levels
- * 50 CTCSS Tones, Encode standard, Decode available with the optional accessory EJ-24U Tone Squelch Unit.
- * S-meter Squelch
- * RF Attenuator
- * APO (Automatic Power Off)
- * TOT (Time Out Timer)
- * 1200/9600 bps packet capable (GMSK type TNC required)
- * AM Aircraft RX Standard (No modification required)
- * Full Duplex with odd split operation
- * Sub-band Mute function
- * 3 Power Output Levels (VHF/UHF Independent)
- * DSQ (Digital Squelch)
- * Beep function
- * Key lock function
- * Built-in Duplexer
- * Remote Microphone Control Application
- * Bell Function
- * Tone Burst Function
- * LITZ Function
(The US First Emergency Alert Monitoring Feature)
- * MARS/CAP Modifiable (Proper FCC licensing required)

This device has not been approved by Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased until the approval of the FCC has been obtained.



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DEMAND THE BEST

DJ-582T Superior Performance

The Right Features. The new Alinco DJ-582T offers you a distinct alternative to the many radios on the market today that inconvenience the user with unnecessarily difficult operation. Alinco's DJ-582T gives you everything you want in a handheld with the kind of user-friendly design even the most advanced amateur radio enthusiasts will appreciate. Improvement on previous models include an accelerated scan speed up to 2 times faster, a separate low power PTT switch, and a highly durable keypad.

Sophistication. Providing cross-band repeat, full duplex operation, a backlit keypad, 8 scanning modes, CTCSS encode and decode, DSQ private paging, and an exceptional receive capacity of 130-174 MHz, 420-474 MHz, and AM 108-136 MHz.

Power. The DJ-582T delivers a full 5 watts of power with the optional EBP-22N 12V battery, and our EMS-8Z Remote Speaker Microphone offers remote command of memory channels, plus scanning features.

130.000 - 173.995 MHz FM (RX)
144.000 - 147.995 MHz FM (TX)
108.000 - 136.000 MHz AM (RX)
420.000 - 470.000 MHz FM (RX)
438.000 - 449.995 MHz FM (TX)

- Cross Band Repeat
- Super Low Battery Consumption Function
- Full Duplex and Dual Watch Capability
- CTCSS Encode and Decode Standard
- 8 Scanning Modes
- Odd Splits on All Memory Channels
- Illuminated Key Pad
- Auto Power Off
- Channel Display Mode

DJ-G1T (2M HT)

The ALINCO DJ-G1T offers a rare combination found in today's HT's:

Compact Construction and a User Friendly Control Design. The Ham operator has easy access to both the dial controls and DTMF keypad, and the Large LCD display adds to the convenience giving you a clear readout of the operating frequency.

Bonus Feature!! CHANNEL SCOPE

Alinco's Channel Scope technology allows you to visually monitor activity on your favorite frequencies as you simultaneously tune into your local repeater. The DJ-G1T displays signal strengths of 7 memory channels at a time to ensure that you don't miss out on the action. The DJ-G1T is the first of its kind to offer this incredible feature, easily accessible with just a couple of keystrokes.

108.000 - 173.995 MHz RX
440.000 - 449.995 MHz RX
144.000 - 147.995 MHz TX

- Extra Large LCD Display
- 80 Memory Channels
- Auto Dial Pause
- 5 Auto Dialer Memories
- DSQ Paging Feature
- Cross-Band Semi Duplex
- 6 scan modes
- Odd Splits on All Memory Channels
- Low Battery Voltage indicator
- Auto Power Off
- CTCSS Encode standard

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Other Great Products from ALINCO

DR-130T



DR-M06T



DR-600T/B



THE ADVANTAGES OF BUYING AZDEN

No matter what your frequency requirements (2, 6, 10, 220, 440), when you buy a mono-bander factory-direct from Azden, you'll enjoy these five great advantages:

POWER: Handhelds-5 watts, Mobiles- 50 watts, (25w on 220MHz, and 35w on 440MHz.) Standard!

FACTORY-DIRECT SERVICE AND TECHNICAL SUPPORT: Factory engineers and technicians perform all service, and our sales staff are hams, with years of experience.

RELIABILITY: All Azden radios are heavy-duty commercial grade (designed to MIL-STD-810), and are virtually "maintenance free".

FLEXIBILITY: We go the extra step, like CAP and MARS mods at no charge, with proper documentation.

TWO YEAR WARRANTY: The only manufacturer confident enough to offer this, everything is covered for the first year, and we only charge for labor in the second year.

So whether you're buying a mobile, handheld radio or communications headset, come to Azden. We understand.



MOBILES	
PCS-7000H	2 Meters
PCS-7200	220 MHz
PCS-7300H	440 MHz
PCS-7500H	6 Meters
PCS-7800H	10 Meters
HANDHELD	
AZ-11	10 Meters
AZ-61	6 Meters
AZ-21A	2 Meters
HEADPHONES	
HS-03	With Boom Mic
DM-10	Without Mic

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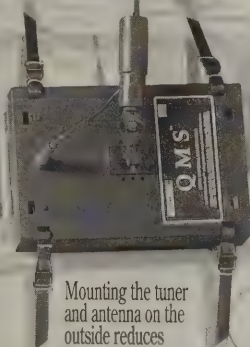
\$895.00

The QMS is an SGC Smarttuner[®] automatic antenna coupler, an SG-303 extended full-range antenna, and the special exterior—waterproof—mounting package, all in one.

The QMS is that large box strapped to the side. We admit, at first glance it looks a little unusual.

But once you use it, you'll find an almost unbelievable jump in reception and transmitting range (3-20 db). The QMS makes a typical HF-SSB perform like it's never performed before.

Match it with a cutting edge SGC HF-SSB and it will blast holes through major mountain ranges and probably some laws of physics. Power and focus are everything in HF-SSB ham rigs. Buy this and own the best base station on—or off—the road.



Mounting the tuner and antenna on the outside reduces engine noise and eliminates power-draining antenna wire runs between the antenna and tuner.

QMS. It's the look of focused power.
LEARN TO LOVE THE LOOK

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STANDARD

Handhelds • Mobiles



► **C-168A 2 Meter Handheld** • Very small! Covers 144-147.995 MHz transmit and 115-175 MHz receive, including (AM) aircraft band. Modifiable for MARS/CAP transmit*. 40-memory channels (optional 200 channel memory unit plug-in). 7 types and 3 modes of scanning. Output: 2.5W output with included 700 mAh, 7.2V battery; 5W at 12V. CTCSS encode and decode, DTMF squelch with page. 4.9" h x 1.8" w x 1.2" d, 10 oz.

► **C-468A** Same as C-168A described above, but covers 438-449.995MHz transmit and 400-470MHz receive.

CALL for Prices...

► **C-188A 2 Meter Thin Handheld** Small – fits in shirt pocket, slide-cover protects keyboard. Covers 144-147.995MHz and 115-175MHz receive including (AM) aircraft band. Modifiable for MARS/CAP transmit*. 40 memory channels (optional extra 40 or 200 memory units plug-in). Ten 15-digit autodial memories. Output: 2.5W with included 700 mAh 6V battery; 5W at 9.6V. 7 types and 3 modes of scanning. CTCSS encode and decode. 5.8" h x 2.3" w x 1.0" d, 10 oz.

► **C-288A** Same as C-188A but covers 220-225 MHz transmit and 115-249 MHz (Standard's Super-Extended receive).

CALL for Prices...

► **C-528A Deluxe Twin Band Handheld** 2 Meters and 440MHz. Covers 144-147.995 & 438-449.995MHz transmit, 130-170 & 400-470MHz receive. Modifiable for MARS/CAP transmit*. Full-duplex cross-band repeat. 40 memory channels (20+20) + 2 call + 2 vfo. Output 2.8W (2M), 2.5W (440MHz) with the supplied 700 mAh, 7.2V battery and 5W with a 12VDC source. Five scan modes per band. CTCSS encode and decode included. DTMF squelch and page. New flex design antenna. 6 1/4" h x 2 1/4" w x 1 1/4" d, 17 oz

► **C-228A** Same as C-528A but 2m/220 MHz–covers 144-147.955 & 220-224.995 transmit and 130-174 & 220-245 MHz receive. Output: 2.5W on both bands.

► **C-628A** Same as C-528A but 440MHz/1.2 GHz. Covers 438-449.995 tx, 400-470MHz rx and 1240-1300MHz transmit and receive. Output: 2.5W (440MHz), 1W (1.2GHz).

► **New! C-568A** Covers 2M/440MHz/1.2GHz tx, receive ranges: 110-199.995, 310-399.995, 345-399.995, 400-485, 800-975.995 (cell blocked) and 1200-1299.990 MHz. AM programmable and auto detect for VHF aircraft band. 40 memories, CTCSS encode/decode, paging, DTMF squelch, battery saver, auto power-off. 2.5W output (35mW on 1.2GHz) with standard battery. 5 1/4" h x 1 3/4" w x 1 1/4" d, 13 3/4 oz.

See p.p. 55, 85 and the Price List for other SGC products and accessories

SGC

► **SG-2000 Amateur HF Transceiver** A rugged Commercial Grade HF transceiver that provides 150W PEP output. Modes: A3A, A3H, A3J and CW in LSB and USB, true AM in receive mode and data. Comes programmed with 644 ITU channels and 100 user defined channels that can be set to the Ham frequencies within the 1.8-30 MHz range; receives 500kHz-30MHz. Keypad control with 21 illuminated keys. Scans ITU channels and 100 memories in user adjustable scan speeds and rates. The large LCD, wide-angle display has adjustable backlighting which provides easy viewing night or day. The SG-2000 operates as a single unit, or the front panel can be removed to function as a remote head. Built-in computer control capability allows the SG-2000 to be controlled by any standard RSS-232 protocol connector for easy operation on all digital modes. Requires 12VDC @ 16A, 4 1/4" h x 10" w x 15" d, 12 lbs **SGC 04-01 \$1479⁰⁰**

► **C-558A Dlx. Super Compact Twin Band HT** Covers 2 meters and 440MHz. Ranges: 144-147.995 and 438-449.995MHz transmit, 115-170 and 400-470MHz receive, including (AM) aircraft band. Modifiable for MARS/CAP transmit*. Full-duplex cross-band repeat. 40 memory channels; optional extra 40 or 200 plug-in memory units available. Ten 15-digit autodial memories. Output: 2.8W (2M), 2.5W (440MHz) with supplied 700 mAh, 7.2V battery or 5W at 12VDC. Five scan modes; 3 types on each band. CTCSS encode and decode included. 5 1/4" h x 2 1/4" w x 1 1/4" d, 12.5 oz **CALL**

► **C-108A 2 Meter Handheld TINIEST HAND-HELD EVER!** Fits in your shirt pocket! 200mW output – plenty for hamfests, picnics, conventions, or working nearby repeaters. Extended receive: 100-175MHz including AM aircraft band. 20 memories, CTCSS encode built-in (23 tones). Four scan modes Powered by just two AA's 3 1/4" h x 2 3/8" w x 1" d, 5 oz.

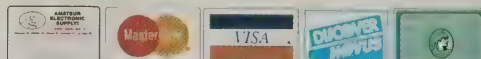
► **New! C-508A Dual Band Handheld** Wide-band coverage. See details on page 57

► **C-178A Dual Band Handheld** Up to 5W on 2M and 50mW on 440MHz. Covers 144-148MHz and 438-450MHz transmit. Extended receive: 110-174 and 320-475MHz, including AM aircraft band. Modifiable for MARS/CAP transmit*. 40 memory snap-in chip with optional extra 40 or 200 memory chips available. CTCSS encode and decode. Seven scanning modes, including CTCSS scan. 2W/2m with supplied 700mAh, 7.2V battery, 5W/2M at 12V. 4 1/4" h x 2 1/4" w x 1 1/4" d, 13 oz. **CALL**

► **C-158A 2 M Handheld** Covers 144-148MHz. Modifiable for MARS/CAP transmit*. 20 memories. 7 scan modes. CTCSS encode and decode. Output is 2W with supplied 700mAh battery and 5W with 12V. 5 1/4" h x 2 1/4" w x 1.2" d, 13 oz.

CLOSEOUT \$209⁹⁵ (with Coupon)

*Modifications for MAR/CAP transmit require an appropriate license.



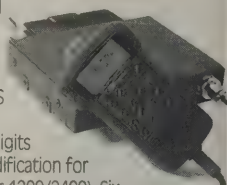
► **SG-230 The Smarttuner®** An automatic HF antenna tuner capable of tuning any length antenna from 8 to 80 ft. long with in the 1.8-30MHz frequency range; 160 meter operation requires a minimum length of 8 ft. Operates with very low power, even tunes itself on an SSB signal; handles up to 150W. A microprocessor controls the switching of 64 input and 32 output capacitor combinations, plus 256 inductance combinations in a pi-network to tune an unknown antenna in just two seconds. 500 memories store previous tuning combinations to tune in milliseconds. Waterproof; for mobile-marine! Requires 10-5VDC @ 0.9A, 12" w x 16" d x 3" h, 8 lbs **SGC 54-12 \$489⁹⁵**

► **SG-500 The SmartPowerCube™** A fully automatic bandswitching, microprocessor controlled HF linear amplifier designed to do exceptional service in fixed, mobile, and marine applications in the 1.6 to 24 MHz range. A rugged power source with a cast aluminum enclosure and extra heavy duty heat sinks, powder coat finish, and the most durable electronic components and assembly techniques. Nearly indestructible, compact and light, specifically designed to operate in an unattended manner making it ideal for installations where access to the amplifier is limited. Output is 500W PEP, with 50 to 90W input; CW rating is 500W out for 10 min, or unlimited with optional fan. Requires 10.0 to 18.0 VDC @ 40A average (SSB), 90A peak, or CW. 6" h x 12" d x 11 1/2" w, 21 lbs **SGC 52-93 \$949⁹⁵**

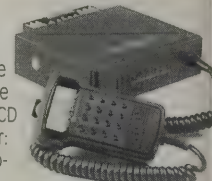


an unattended manner making it ideal for installations where access to the amplifier is limited. Output is 500W PEP, with 50 to 90W input; CW rating is 500W out for 10 min, or unlimited with optional fan. Requires 10.0 to 18.0 VDC @ 40A average (SSB), 90A peak, or CW. 6" h x 12" d x 11 1/2" w, 21 lbs **SGC 52-93 \$949⁹⁵**

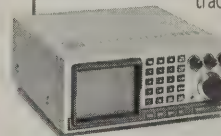
► **C-1208DA 2 Meter Mobile** 50W of power totally controlled from the microphone! Remote the radio anywhere: the microphone has a large LCD display, all controls, and speaker. Super extended receive 100-200 and 250-520MHz including (AM) aircraft band. 100 memories. CTCSS encode and decode built-in. 10 DTMF autodial memories of 15 digits each. Plug-in ready without modification for high-speed 9600 baud packet (or 1200/2400). Six scan modes, including priority and CTCSS. Modifiable for MARS/CAP transmit*. 5 1/2" w x 5 3/4" d, 1.7 lbs **CALL**



► **C-5718DA Twin Band Mobile** • 2M/440MHz with 110-199 and 250-499 MHz extended receive including (AM) aircraft band. Operate as one unit with an optional snap-on twin frequency display front panel, or remotely, out of the way, using the optional front panel extension cable. Also, control the radio remotely with the unique remote control microphone which has a back-lit keypad, twin LCD display and speaker–built-in! Power: 50W (2m) 40W (440MHz). 40 memories (optional 200 channel memory chip plug-in). CTCSS encode and decode built-in. Crossband repeat mode. Full-duplex crossband transmit and receive. DTMF paging and coded squelch. 8 kinds of scan, including CTCSS scan–each band scans separately. Dual frequency receive: 2-VHF, or 2-UHF, or 1-VHF and 1-UHF. Packet ready for 9600 (1200/2400) baud, and interface for VHF/UHF; just add a TNC. Modifiable for MARS/CAP tx*. 1 1/4" h x 5 1/2" w x 5 1/2" d, 2.2 lbs. **CALL**



► **CCR-708A Communications Test Receiver with Spectral Display Scope** Full Coverage from 50 to 904.995MHz. LCD spectral display scope used for evaluating signal strength and tracking down near by interfering signals. 100 memory channels. AM, N/FM, and W/FM modes. Display range: 100 KHz, 250 KHz, or 1000 KHz. 13.8V DC or 120V with supplied AC adapter. 2 1/2" h x 7 1/2" w x 7 1/2" d, 4.6 lbs **CALL**



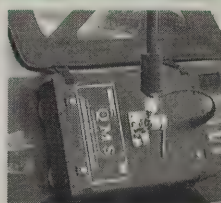
See the Price list for optional accessories for these STANDARD Radios.

Call the AES® BBS!

(414) 358-3472 (8-N-1 up to 14.4k baud)

Prices • Special • Important Info • More!

Internet E-Mail Address: aesham@execpc.com



► **QMS Antenna Tuner System** The QMS is an SGC Smart-tuner® automatic antenna coupler, an SG-303 9 ft. extended full range antenna, and a special exterior-waterproof mounting package, all-in-one. It looks unusual, but it gives any mobile operating in the 1.8-30MHz

range with up to 150W, an almost unbelievable jump in reception and transmitting range (3-20dB). Mounting the tuner on the outside reduces engine noise and eliminates power draining antenna wire runs between the antenna and tuner. It attaches to vehicle using high suction devices and nylon webbing, and provides a rugged antenna installation without drilling any holes. 18" w x 12" d x 5" h, 24 lbs. **See Price List**

**Prices • Trade-In Quotes
Orders • Information
1-800-558-0411**



**Hi! ... I'm Carl, WB9STM
Call me for
Super Values!**

GRIP IT. LIVE IT.

New Dual Band!
Wide band HT!
C508A

STANDARD

has done it again!

Great radios come in small packages. First came the C108A - the tiniest 2m radio - operates on 2AA batteries and fits in your shirt pocket.

Next, GREATNESS evolved into the C508A the DUAL BAND big brother to the C108A - it too, fits in your shirt pocket and operates on 2AA batteries, and more... The C508A has 280mW of output (comparable to low power of most HT's operating on a nicad battery pack) adequate power to hit most local repeaters with its helical designed antenna.

Take it anywhere.

The C508A is perfect for HAMFESTS, picnics, hiking, or while using your mobile rig in cross-band repeat mode, for quick access to a distant repeater. Be confident that your carrying the BEST amateur radio - you've got a STANDARD. STANDARD has exceptional RF features, incredible extended receive capabilities and solid transmitting performance.

Specifications

- Frequency Coverage: 100-180 MHz
Receive: Approx: 340-400 MHz
Transmit: Ham bands 400-480 MHz
- AM programmable for aircraft
- 60 memories + 2-VFO, 2-Call
- CTCSS 39 tones-Encode/Decode
- 22 menu selections
- RF squelch
- Freq steps, 5, 10, 12.5, 15, 20, 25, 30 and 50
- Scan types: Busy, Pause or Hold
Scan: 1 MHz, Entire band, Program, Memory, Specific memory frequencies, Block and CTCSS
- PTT and Frequency lock
- Keyboard lock
- Tone burst: 1750 Hz
- APO: Auto Power Off
- Battery save: 4 steps
- Auto power off: adjustable
- Output power: 280 mW
- Operates from 3V "2-AA"
- Size approx: 2.28" W, 3.35" L, 0.98" D
- * Weight approx: 5.65 oz

DUAL BAND
ANTENNA

VHF & UHF IN YOUR SHIRT POCKET!!

FREQUENCY
SELECTOR

PLUG IN A
CMP123 EAR-MIC

EASILY PROGRAMMABLE
MENU DRIVEN SCREEN

EASILY OPERATED
VOLUME CONTROL

BACKLIT
DISPLAY

TRUE PORTABILITY
WITH TWO AA
BATTERIES

ACTUAL
SIZE!

60 FULLY
PROGRAMMABLE
MEMORIES

ACCESSORIES

- CHP111 Headset microphone
- CHP150 VOX microphone
- CLC502 Standard soft case
- CMP111 Speaker microphone
- CMP113 Tie pin microphone
- CMP115 Mini speaker microphone
- CMP123 Ear speaker/mic
- CNB401 NiCad battery pack
- CSA401A NiCad battery charger

STANDARD is the world's largest manufacturer of VHF-UHF Amateur Radio Equipment. For further information contact your Standard dealer or call (312)763-0081 FAX (312)763-3377 Standard Amateur Radio Products, Inc. P.O. Box 48480 Niles, Illinois 60714

* Modifications for MARS/CAP transmit require an appropriate license.

Specifications, features and price are subject to change without obligation or notice.



STANDARD

TINIEST

HAND-HELD

C508A

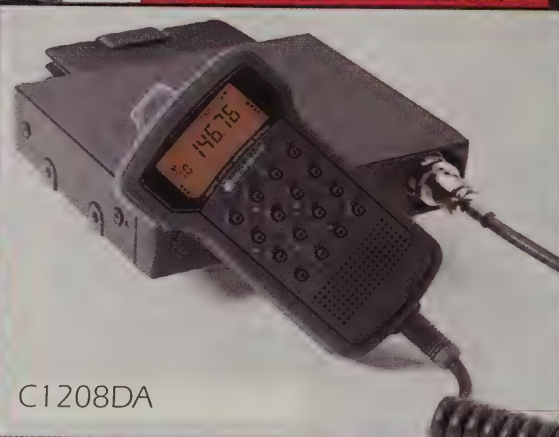
WE'RE STANDARD AND WE'VE GOT YOUR STYLE!

Superior Intermod Rejection!

STANDARD PIONEERS ANOTHER FIRST! THE C5718DA & C1208DA IS PACKET READY! Designed with packet in mind. Out-of-the-box high-speed, 9600 baud, interface. Just connect your TNC to the radio and you're on the high speed packet network. Also, operates at 1200 and 2400 baud equally well.



C5718DA



C1208DA

C5718DA TWIN-BAND MOBILE

50 Watts of power totally controlled from the microphone! Remote this radio anywhere!

Unsurpassed intermod rejection.

Built in Antenna Duplexer.

Dual frequency receive: two VHF, two UHF, or VHF/UHF.

Frequency range:

Receives 110-199.995 MHz (including AM aircraft) and 250-499.995 MHz.

50 Watts 2M, 40 Watts 70cm

(3W Low, 10W Medium selectable)

Memories: 40 (20 per band); stores frequency, offsets and CTCSS tones.

200 memory channel option, CMU182.

CTCSS Encode/Decode standard.

Frequency steps, 5, 10, 12.5, 15, 20, 25, 50 and 100 KHz.

Full Duplex cross band operation with CTCSS tones.

Paging/Coded squelch.

DTMF autopatch dialing, 6 memories, 15 digits.

Eight kinds of scan, including priority and CTCSS.

Memory scan lock-out.

Back-lit Keypad and Display

Auto mute opposite band, three settings (-6, -12 and -18dB).

Cooling fan built-in.

Size: 5.51"W 1.57"H 5.31"D Weight 2.2 lbs.

Mobile bracket and power cord (2M) included.

STANDARD HAS EVERYTHING IN THE SPEAKER-MIC WHILE DELIVERING UP TO 50 WATTS!

C1208DA TWIN-BAND MOBILE

The smallest, lowest price 2 meter mobile radio that delivers all the features. Mount it under a seat or even in the trunk using the optional extension cable (CAW561 or CAW562).

Frequency range:

Receives 110-199.995 MHz (including AM aircraft) and 250-519.995 MHz.

50 Watts, 10W and 3W selectable

Built in Antenna Duplexer for 450 MHz receive

Memories: 100; stores frequency, offsets and CTCSS tones.

CTCSS Encoder/Decode standard.

Frequency steps, 5, 10, 12.5, 15, 20, 25, 50 and 100 KHz.

Paging/Coded squelch.

DTMF autopatch dialing, 10 memories, 15 digits.

Six kinds of scan, including priority and CTCSS.

Back-lit Keypad and Display

Auto mute: four settings (-10, -20, -30 and off)

Semi Duplex cross-band operation with CTCSS tones

Cooling fan built-in

Size: 5.51"W 1.18"H 5.79"D Weight 1.65 lbs.

Mobile bracket and power cord (3M) included.

MARS and CAP modification available (permit required).

Specifications, features and prices are subject to change without obligation or notice.

STANDARD Amateur Radio, Products, Inc.
P.O. Box 48480, Niles, Illinois 60714



STANDARD®



STANDARD[®]

**GET A GRIP
GET IN
STYLE!**



**Superior
Intermod
Rejection!**

C158A 2 Meters The Affordable HT

- 5 Watts at 12 VDC
- 20 memories
- 130-170MHz extended receive
- Unsurpassed 0.158 microvolts sensitivity
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

C168A 2 Meters The Deluxe Small HT

- 5 Watts at 12 VDC
- 40+ memories (or optional 200+ with plug-in chip)
- 115-174MHz extended receive (including AM aircraft band)
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

C178A 2 Meters (+ low power 440) The Deluxe Dual-Band HT

- Single-Band Price 5 W (2M) at 12 VDC & 50mW (440)
- 40+ memories (or optional 200+ with plug-in chip)
- 110-174 & 320-474MHz extended Rx (including AM aircraft band)
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

C288A 220MHz The Slim-Line HT Fits in your shirt pocket!

- 5 W at high power
- 40+ memories (or optional 200+ with snap-in chip)
- 115-249MHz super extended receive
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning

C188A 2 Meters The Slim-Line HT Fits in your shirt pocket!

- 5 W at high power
- 40+ memories (or optional 200+ with snap-in chip)
- 115-174MHz extended receive (including AM aircraft band)
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

C468A 440MHz The Deluxe Small HT

- 5 W at 12 VDC
- 40+ memories (or optional 200+ with plug-in chip)
- 400-474MHz extended receive
- CTCSS encode and decode
- DTMF squelch with Paging
- 3 modes of scanning
- *Modifiable for MARS/CAP

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For further information contact your Standard dealer or call (312)763-0081 FAX (312)763-3377
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P.O. Box 48480 Niles, Illinois 60714

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ICOM HF TRANSCEIVERS

IC-77



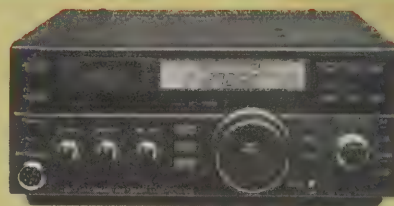
- HF - 100 W (AM-25 W)
- For Export Only
- Alpha Numeric Display
- 50 Memory Channels
- Front Facing Speaker
- Rugged Construction
- 100% Continuous Duty Cycle
- Preprogrammable By User or Dealer
- Optional AT-130 Antenna Tuner

IC-707



- HF - 100 W (AM-25 W)
- Ideal for Mobile Operation
- Minimum Number of Keys
- Front Facing Speaker
- Large Display
- Rugged Construction
- 100% Continuous Duty Cycle
- 32 Memory Channels
- Lightweight (9.1 lbs)

IC-728



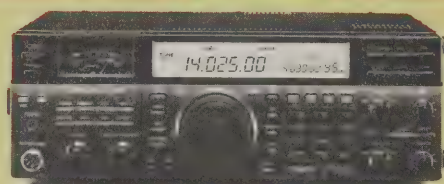
- HF - 100 W (AM-40 W)
- Triple Conversion Receiver
- Passband Tuning
- Speech Compressor
- 26 Memories
- Direct Digital Synthesizer
- Dual VFO's
- Microphone Included

IC-706



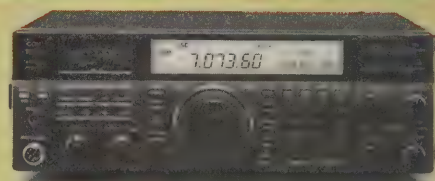
- HF + 6 M 100 W (SSB/CW/AM/FM/RTTY)
- 2 M 10 W (SSB/CW/RTTY/FM), 4 W (AM)
- All Modes including RTTY
- Receive Range 30 kHz - 200 MHz
- Detachable Control Panel/Display
- Smallest Size for an HF ever!
- 101 Alphanumeric Memories (99 Split)
- SSB/AM/CW Narrow Filter Options
- Noise Blanker
- IF Shift
- Preamp/Attenuator
- CW Pitch Control/Reverse
- CY Keyer
- Full Break-in (QSK)
- Speech Processor
- VOX/XFC
- LCD Display with 1 Hz Readout
- Easy-to-use Scroll Menu System
- Voice Synthesizer Option (UT-102)
- Tone Encode Built-in
- Matching Antenna Tuner Option (AT-180)
- 2 Antenna Connectors (HF/VHF)

IC-738



- HF - 100 W (AM-40 W)
- Next Generation Technology
- New "I-Loop" D.D.S. (1 Hz Resolution)
- New AT-170 Antenna Tuner w/ 100 kHz Preset Memories
- Automatic Tuner Start (Retune)
- Tuner Sensitive/Tuner Normal Modes
- 100% Duty Cycle (2 Cooling Fans)
- Automatic Antenna Selector
- Pre-programmable Quick Split Function
- Separate CW Jacks
- 4 Function Meter (PO/SWR/ALC/S)
- RF Gain Control
- All Other Features of the IC-737A

IC-736



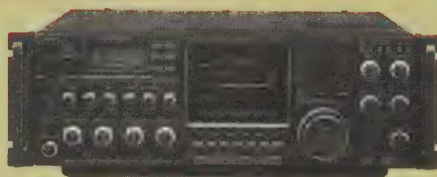
- HF + 6 M
- 100 W (6 M also) (AM-40 W)
- Internal Tuner (6 M also)
- Internal Power Supply
- 100% Full Duty Cycle
- PBT and Notch Filter
- Newly Designed D.D.S.
- 1 Hz Tuning Resolution
- 101 Memories

IC-775DSP

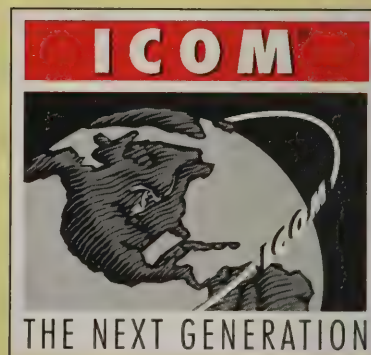


- DSP (Digital Signal Processing) Tx and Rx
- 200 W Stable Output Power (SSB/AM/FM/CW/RTTY)
- Built-in Heavy Duty Power Supply
- Automatic IF Notch Filter
- Adjustable DSP Noise Reduction
- Level/Width Variable Noise Blanker
- PSN Modulation
- Audio Peak Filter
- Dual Watch (2 Receivers)
- Twin Tuning Knobs
- Twin Pass Band Tuning
- Power MOS FET's
- Electronic Keyer
- Memory Keyer
- CW Pitch Control
- CW Reverse
- Two Key Jacks
- Full Break-in (QSK)
- Selectable Filters (CW/SSB/AM)
- Selectable Tone/Shift Frequency
- New CFL (Cold Cathode Fluorescent Lamp) LCD Display
- Transmit Signal Monitor
- RF Speech Processor

IC-781



- HF - 150 W (AM-75 W)
- Multi Function CRT Display
- Dual Watch
- Quad Conversion Receiver
- Twin Passband Tuning
- Built In Tuner
- Built-in Power Supply
- 99 Memories



ICOM®

Call the Brochure Hotline: (206) 450-6088
or contact ICOM Technical Support in the Hamnet Forum
on CompuServe® @ 75540,525 (Internet: 75540.525 @
compuserve.com) for more information about these products

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ICOM MOBILE TRANSCEIVERS

IC-281H

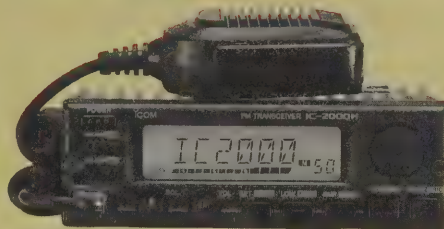


- 2 Meter Tx/Rx, 440 MHz Rx
- 50 Watts
- 70 Memories (Allocatable)
- 10 Scratch Pad Memories
- 9600 BPS Modulation
- Packet Plug & Play
- Auto Repeater Functions
- Remote Control Microphone
- Tone Scan (opt)

IC-481H

- Same features as 281H • 440 MHz Tx/Rx, 2 M Rx

IC-2000H



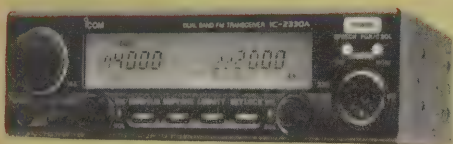
- 2 M w/Rx (118 - 174 MHz, AM Detect)
- 50 Watts Tx
- Superior Wide Rx Performance
- Tracking Tuning System
- High Quality RF Pass Band Filters
- Improved Performance Against Intermod
- Alphanumeric Display
- Rugged "One Piece" Construction
- 50 Memory Channels
- Busy Repeater Lockout
- Remote Control Mic (Opt. UT-101)
- Tone Scan (Opt. UT-58)
- Tone Encode Built-in

IC-38A



- 220 MHz
- 45 Watts
- 20 Memory Channels
- Scan and Priority Watch
- Adjustable Display Intensity
- Encode Built-in
- Optional Pocket Beep and Tone Squelch

IC-2330A



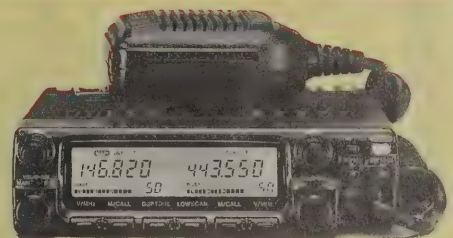
- 2 M (45 W), 220 MHz (25 W)
- Simultaneous Receive
- Dual Controls
- "One Touch" Switches
- 42 Memories
- Built-in Duplexer
- Illuminated Switches
- Multiple Scans
- Remoteable w/ "Talk Back" (opt)
- Built-in PL Encode

IC-2340H



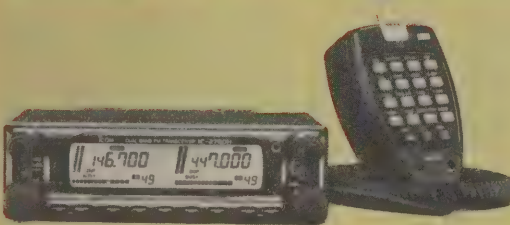
- 2 M (45 W), 440 MHz (35 W)
- Remote Control Microphone (opt)
- True Independent Dual Bands
- 110 Memories
- "One Touch" Switches
- Tone Scan (opt)
- Auto Repeater Shift
- Built-in Duplexer
- PL Encode Built-in
- Voice Synthesizer (opt)
- Remoteable with "Talk Back" (opt)
- DTMF Auto Dialing (14) Memories

IC-2350H



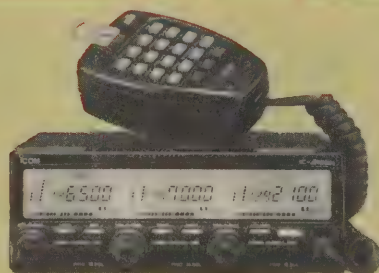
- 2 M (45 W), 440 MHz (35 W)
- Wide Band Rx (118 MHz - 174 MHz)
- 100 Memories
- Tone Scan (opt)
- Remote Control Mic (opt)
- PL Encode Built-in
- Built-in Duplexer
- Auto Repeater Shift
- Voice Synthesizer (opt)

IC-2700H

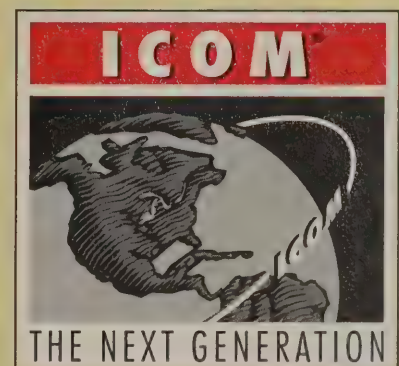


- 2 M (50 W), 440 MHz (35 W)
- Detachable Control Panel
- Remote Control Microphone
- Infrared Microphone (opt)
- V/U, U/U, V/U
- Auto Repeater Shift
- Tone Scan (opt)
- Built-in Pager, Code Squelch
- Built-in PL Encode
- True Independent Dual Bands
- 122 Memories
- Remoteable with "Talk Back" (opt)
- Voice Synthesizer (opt)
- DTMF Auto Dialing (14) Memories

IC-Δ100H



- Triple Band (2 M/440 MHz/1.2 GHz)
- 50 W (2 M), 35 W (440 MHz), 10 W (1.2GHz)
- Selectable Band Combinations (8)
- 642 Memories
- Full Remote Control Microphone
- Detachable Control Panel
- 14 DTMF Auto Dial Memories
- High Performance
- PL Tone Encode Included
- 3 External Speaker Jacks
- Multiple Scans
- Remoteable with "Talk Back" (opt)



ICOM®

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on CompuServe® @ 75540.525 (Internet: 75540.525 @
compuserve.com) for more information about these products

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ICOM HANDHELD TRANSCEIVERS

IC-V68



- Voice Scrambler (UT-88 Required)
- Fully Programmable

- For Export Only
- 136-174 MHz Tx/Rx
- 5 W @ 13.8 V DC
- 40 Memory Channels
- AA Battery Case (BP-99) standard. NiCd version also available (BP-160+BP-99)
- ANI (Automatic # ID)
- Cloning (via cable)
- Code Squelch/Paging
- Programming Manual Required
- PL Tone (88.5 Hz)
- Built-in (38 others with the UT-86)
- PC Programmable

IC-U68

- Same features as V68
- 440 MHz

IC-2GXA



- For Export Only - Not Certified for U.S. Use
- 2 M
- 7 W @ 13.5 V DC
- 40 Memory Channels
- AA Battery Case (BP-130A) standard. NiCd version also available (BP-130A+BP-160)
- Wall charger incl. w/both models.
- No Touch Tone Pad
- C.T.C.S.S.
- Built-in PL Encode/Decode
- Auto Repeater Operation
- Tone Scan (UT-86)
- Channel Only Mode

IC-2GXAT



- 2 M
- 7 W @ 13.5 V DC
- 40 Memory Channels
- 700 mAh Battery
- Auto Repeater Operation
- Tone Scan
- DTMF Redial, Memories
- 350 mW Audio
- Selectable DTMF Speed
- Built-in PL Encode/Decode
- 35 mA Current Drain

IC-4GXAT

- Same features as 2GXAT
- 440 MHz

IC-2GXAT-HP



- 2 M
- 7 W @ 13.5 V DC
- BP-174 Battery Pack (12 V, 600 mAh)
- AD-25 Battery Charge Adapter Incl.
- 40 Memory Channels
- 700 mAh Battery
- Auto Repeater Operation
- Tone Scan
- DTMF Redial, Memories
- 350 mW Audio
- Selectable DTMF Speed
- Built-in PL Encode/Decode
- 35 mA Current Drain

IC-T22A†



- Die Cast Frame and Heat Sink
- Tone Scan (Opt. UT-84)

- 2 M, 5 W @ 13.5 V
- 4.0 - 16 V DC Input (Charges Battery During Op.)
- Auto Low Power/Power Saver (15 mA Drain)
- Remote Control Mic (Opt. HM-75A)
- 40 Memory Channels w/Alpha Display
- Air Cloning
- VHF/UHF Air Band Rx
- Auto Repeater Func.
- Backlit Display
- Channel-only Display if Desired

IC-T42A†

- Same features as T42A
- 440 MHz

IC-T21A

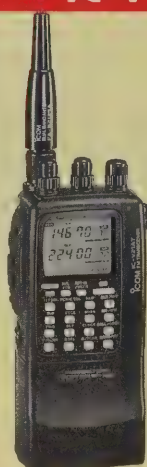


- 2 M
- 6 W @ 13.5 V DC
- Bonus Receive Band (2 M or 440 MHz)
- 6 Hours Operating Time
- 114 Memory Channels
- 33 Channels/Sec Scan
- Auto Low Power
- Full Crossband Duplex
- Battery Capacity Indicator
- Selectable DTMF Speed
- Auto Repeater Shift
- Tone Scan Built-in
- Backlit Keyboard

IC-T41A

- Same features as T21A
- 440 MHz

IC-V21AT



- 2 M/220 MHz
- 5 W @ 13.8 V DC
- Rx Two Signals on Same Band
- Built-in Pocket Beep, Pager
- Built-in Code, Tone Squelch
- Repeater Quick Memory
- Backlit Keypad
- Auto Output Power Control
- 900 mAh Battery
- 70 Memories
- Whisper Mode (opt)

IC-X21AT



- 440 MHz/1.2 GHz
- Bonus 2 M Receive
- 5 W (440 MHz), 1 W (1.2 GHz)
- 70 Memories
- Built-in Pager, Code Squelch
- Built-in Pocket Beep, Tone Squelch
- Repeater Quick Memory
- Auto Power Output
- Whisper Mode (opt)
- 900 mAh Battery
- 5 Power Levels
- Backlit Keypad

IC-W31A†



- CTCSS Encode Stnd. (Decode Opt. UT-93)
- Tone Scan (Opt. UT-93)
- AM Aircraft Rx

- 2 M/440 MHz
- 5 W @ 13.5 V
- Remote Control Speaker Mic (Opt. HM-75A)
- 100 Memories with Alphanumeric Display
- Alphanumeric Message and Paging
- Backlit Display & Keypad
- Independent Tuning Knobs
- Long Operating Times (Power Saver and 700 mAh Battery)
- V/V, V/U, U/U Operation (Simultaneous Receive)
- External DC (4.0 V - 16.0 V) Charges Battery During Operation
- Auto Repeater Functions
- CTCSS Encode Stnd. (Decode Opt. UT-93)

IC-Z1A



- External DC (4.0 V - 16.0 V) Charges Battery During Operation
- Auto Repeater Functions
- CTCSS Encode Stnd. (Decode Opt. UT-93)

- 2 M/440 MHz
- 5 W @ 13.5 V
- Detachable Remote Control Speaker/Mic Standard with Full Functional Control and Dual Band Display
- 100 Memories with Alphanumeric Display
- Alphanumeric Message and Paging
- Backlit Display and Keypad
- Independent Tuning Knobs
- Long Operating Times (Power Saver and 700 mAh Battery)
- V/V, V/U, U/U Operation (Simultaneous Receive)
- Tone Scan (Opt. UT-93)
- AM Aircraft Rx

IC-Δ1A



- 2 M/440 MHz/1.2 GHz
- 5 W (2 M), 5 W (440 MHz), 1 W (1.2 GHz)
- 3 Independent Bands
- Simultaneous Receive
- 3 Independent Displays
- Crossband Double Duplex
- Programmable Digital Squelch
- Speaker Selection
- 78 Memories
- DTMF Encode/Decode
- PL Encode
- Clock
- 1200 mAh Battery

ICOM®

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or contact ICOM Technical Support in the Hamnet Forum
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compuserve.com) for more information about these products

† This device has not been approved by the Federal Communications Commission.
This device is not, and may not be, offered for sale or lease, or sold or leased until the approval of the FCC has been obtained.

ICOM BASE STATIONS/RECEIVERS/REPEATERS

IC-275H



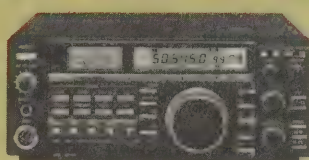
- 100 W
- 144 MHz
- 99 Memory Channels
- Direct Digital Synthesis
- Lockup Times < 5 msec.
- Data Switch
- Fast Squelch Circuit
- Built-in Preampfier (10 db)
- High Stability
- Passband Tuning
- Notch Filter
- Variable Tone Control
- Speech Compressor

IC-475H



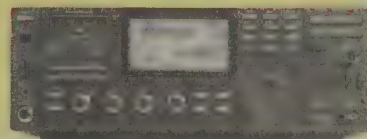
- 75 W
- 440 MHz
- 99 Memory Channels
- Direct Digital Synthesis
- Lockup Times < 5 msec.
- Data Switch
- Fast Squelch Circuit
- Built-in Preampfier (10 db)
- High Stability
- Passband Tuning
- Notch Filter
- Variable Tone Control
- Speech Compressor

IC-575H



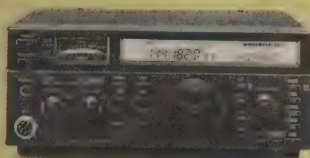
- 100 W
- 28 MHz (10 M)/ 50 MHz (6 M)
- 99 Memory Channels
- Direct Digital Synthesis
- Lockup Times < 5 msec.
- Data Switch
- Fast Squelch Circuit
- Built-in Preampfier (10 db)
- High Stability
- Passband Tuning
- Notch Filter
- Variable Tone Control
- Speech Compressor

IC-970H



- Multi Band, All Mode
- 144 MHz/ 440 MHz Built-in
- 1.2 GHz/ 2.4 GHz/ Opt. Band Units
- 45 W (2 M), 40W (440 MHz), (10W (1.2 GHz) Optional)
- 396 Memories
- Automatic Satellite Tracking
- 10 Satellite Memories
- Simultaneous Receive
- Built-in Power Supply

IC-820H



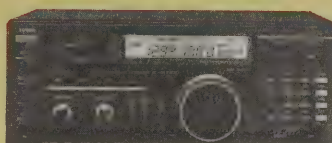
- Dual Band, All Mode
- 45 W (2 M), 40 W (440 MHz)
- 1 Hz Tuning Resolution
- 116 Memories (10 Satellite)
- Built-in Satellite Functions
- Independent Controls and Display
- Sub Tuning Functions
- 9600 BPS Packet Operation

IC-R100-11



- 100 kHz - 799 MHz 900 MHz - 1856 MHz
- AM, FM, WFM
- Mobile
- 100 Memories
- 20 Scan Edge Memories
- RF Attenuator (20dB)
- Preamp (15 dB)
- 24 Hour Clock
- AFC
- Auto Noise Limiter
- Keyboard Entry
- Model R100-03 for Government Sales (same price)

IC-7100A-12



- 25 MHz - 799 MHz 900 MHz - 1999 MHz
- SSB, AM, FM, WFM
- TV Broadcasts
- Direct Keyboard Entry
- 900 Memory Channels
- 10 Memory Banks
- 20 Scan Edge Memories
- Built-in Clock
- Multiple Scans
- Window Scans
- Model R7100-02 for Government Sales (same price)

IC-R1-15



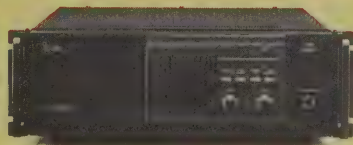
- 100 kHz - 799 MHz 900 MHz - 1300 MHz
- AM, FM, WFM
- Compact
- 100 Memories
- External Batt. (opt)
- Internal Battery (Standard)
- Multiple Scanning
- Sleep Timer
- Model R1-08 for Government Sales (same price)

IC-R71A



- 100 kHz - 30 MHz
- SSB, CW, AM, FM and RTTY
- Superior RF Circuits
- Notch Filter
- Direct Frequency Entry
- 32 Memory Channels
- Remote Control (opt)
- Multiple Scanning
- Voice Synthesizer (opt)

IC-RP1520



- 144 - 148 MHz
- FM (25 W)
- Commercial Quality
- 24 Hour Continuous Duty
- DTMF Remote Control
- Programmable Hang-up and Time-out Timer
- Excellent Low IMD
- AC/DC Power System
- Programmable CW Call Sign ID
- Transceiver Operation Capability

IC-RP4020



- 430 - 450 MHz (25 W and 50 W versions)
- Commercial Grade
- DTMF Remote Control
- Advanced Cooling System
- Hang-up and Time-out Timer
- Remote CTCSS Control
- Programmable CW Call Sign ID
- Excellent Low IMD
- AC/DC Operation

IC-RP2210



- 220 - 225 MHz
- FM (25 W)
- Commercial Quality
- Extra Large Heatsink
- Hang-up Timer and Time-out Timer
- DTMF Remote Control
- Programmable CW Call Sign ID
- Four Function One-Chip Controller
- Excellent Low IMD

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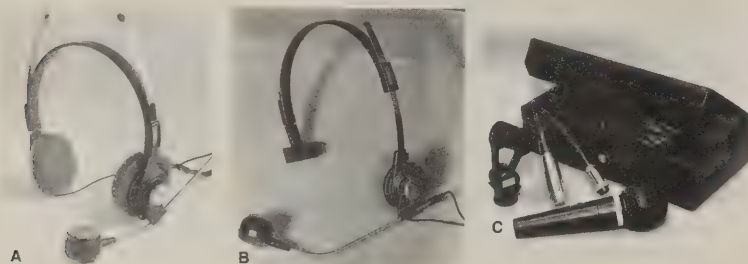
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Microphones • Headsets • Accessories



A rugged, lightweight boomset designed for long wearing time during contests, etc. The headband has detents on each side for adjustment, and is fully padded for comfort. The vinyl earpads are also heavily padded, seal out noise, and are removable for washing. The flexible microphone boom adjusts to about any location and folds up for storage. Specify HEIL HC-4 or HC-5 mic cartridge (below) **\$122⁰⁰**
Adapter cables for ICOM, KENWOOD or YAESU transceivers **ea. \$13⁰⁰**



BM-10 Dual Boomset (A) • A specially designed communications boomset with dual headphones and microphone with choice of HEIL cartridges. Weighing only 8 oz., the headpieces are soft and comfortable for prolonged use in contests and DXpeditions. Due to the special rim design of the earphone, they limit external noise—so desirable in multi-op contest setups. The entire boomset is extremely versatile allowing removal/adjustment of each head piece or microphone boom to suit your needs, yet it remains sturdy to meet the demands of extended hours of operation. Specify HC-4 or HC-5 microphone cartridge (described below) **\$71⁹⁰**

BM-10 Boomset • wired for ICOM, KENWOOD or YAESU (specify), also specify HC-4 or HC-5 microphone cartridge (described below) **\$85⁹⁰**

BM-5 Single Boomset (B) • A single headphone version of the BM-10. Great for mobile use or for those that desire just one side—allowing for monitoring other activity. Specify HC-4 or HC-5 microphone cartridge (described below) **\$64⁹⁰**

BM5 Single Boomset • wired for ICOM, KENWOOD or YAESU (specify), also specify HC-4 or HC-5 microphone cartridge (described below) **\$69⁹⁰**



HEIL – SA-1 Compact Sound System

This is an ingenious compact sound system that improves audio to allow operators to do a better job of hearing weak signals. It makes it easier to sort out the tones, and provides high quality audio like never heard before from amateur radio transceivers, communications receivers, handhelds or scanners.

Normally, the speaker built into radios as well as external accessory speakers, very inexpensive transducers. Their inherent low efficiency, poor frequency response and high distortion levels aren't able to produce high quality audio.

To overcome poor audio, the SA-1 is designed with a high quality 5W amplifier driving a 4" broadband speaker that works into a ported cavity. A pre-amplifier circuit contains a variable equalizer allowing tonality adjustment of the received audio for maximum articulation. The SA-1 requires 12V DC @ 600 ma for operation. It comes with an audio input cable, DC input plug and hookup sheet.... **\$85⁰⁰**



HM-10 Microphone (C) • A hand-held studio-style microphone with desk stand boom mount options and choice of HEIL cartridges. Operate PTT or VOX, designed to work with virtually any late model transceiver. Specify for ICOM, KENWOOD or YAESU, also specify HC-4 or HC-5 cartridge (below)..... **\$85⁰⁰**

HM-10 DUAL • Amateur Radio's *ultimate* microphone. Similar to the HM-10 but has *both* HC-4 DX element and HC-5 Full Range microphone cartridges built-in and switch selectable. Specify for ICOM, YAESU or KENWOOD **\$131⁰⁰**

TB-1 Table Base (D) • for HM-10 microphones. 6" high, heavy (2 lb., 10 oz.) cast base with non-skid cork feet. *Pictured with microphone, not included* **\$12⁰⁰**

MA-1 Boom and Clamp Assembly (E) • for HM-10 microphones. Boom adjustable 6" to 24". Attaches to desk or shelf, or hangs from ceiling. Swivels 360° and places HM-10 or DUAL TEN microphone exactly where needed. Use FS-1 footswitch for convenient, hands free PTT operation..... **\$49⁰⁰**

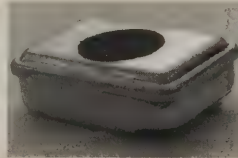
FS-1 Foot switch (F) • Foot control of PTT function of any transmitter. Non-skid rubber pad, top and bottom, supplied with 7 ft. cable and 1/4" phone plug. **\$24⁰⁰**

HEIL – Replacement Microphone Cartridges

Most communications microphones today were designed for public address – not for SSB, with the frequency response needed for getting through pile-ups, or providing maximum voice clarity. If you aren't satisfied with the "sound of your station" you can solve this problem by replacing the cartridge in your microphone with a Heil Key Element for a dramatic improvement. It's tiny in size, and easily replaces existing cartridges in most microphones.

HEIL HC-4 – The DX Dream Machine

The replacement microphone cartridge for Contest and DX operators. It's engineered with a high-pitched, pile-up busting frequency response of 500Hz–3800Hz with a 10dB peak at 2000Hz, and a sharp 12dB per octave roll off at 500Hz. Provides your rig with excellent clarity and more punch for getting through the pile-ups. Impedance: 2kΩ @ 1000Hz – works well into low (500-600Ω) and medium (2k-5kΩ) inputs. Cardioid pattern. Size: .530" d x .850" w x .310" h... **\$28⁹⁰**



HEIL HC-5 – The Key Element

The replacement microphone cartridge for everyday Rag Chewing. Engineered with full range articulation and maximum voice clarity. Not mushy, bassy paging-type audio, but very clear, easy to understand SSB audio. Response: 350Hz–4000Hz, with a sharp roll-off under 300Hz and above 3100Hz with a peak at 2100Hz. Impedance: 2kΩ @ 1000Hz – works well into low (500-600Ω) and medium (2k-5kΩ) inputs. Cardioid pattern. Size: .530" d x .850" w x .310" h... **\$28⁹⁰**

KENWOOD Amateur Radio Equipment

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Call Toll Free 1-800-558-0411**

The World's Smallest HF Transceiver!

TS-50S All-mode, 160-10M with 500kHz-30MHz receiver, 100 memories, and scanning functions. 100W output CW/SSB/FM; 25W AM. Dual VFOs, 100 memories. Programmable function keypad, large LCD display with dimmer, menu programming. DDS with "Fuzzy" control logic, speech processor. RTT, TF-set, IF shift, AIP, CW reverse, all-mode squelch, noise blanker, selectable full or semi break-in. Computer controllable. 12V DC-20A. 2 1/2" h x 7 1/8" w x 9 1/8" d, 6.4 lbs

TS-60S 6-meter transceiver with features/specifications same as the TS-50S except - receiver is 50-50MHz only. Power is 90W in SSB/CW/FM modes; 25W AM, and CTCSS encode is built-in.

TS-950SDX All mode 150W 160-10M with 100kHz-30MHz receiver, built-in antenna tuner. Simult. dual receive. MARS modifiable. 150W out (50V MOS FET finals). Dual digital VFOs, direct band key access, 100 memories, multiple scan functions. Speech processor, QSK semi-break-in, IF VBT, AF VBT, SSB slope tuning. Rx/tx DSP w/23 position AF digital filter, auto AGC, 500 Hz sub-receiver CW filter. DDS. Memory keyer, remote key pad, speaker outputs for main and sub receivers. Filters: 1st/2nd IF 500Hz, 2nd IF 250 Hz, 6kHz AM, 2.4kHz SSB. Selectable tone or CTCSS, computer interface, built-in AC supply. 5 1/2" h x 15 1/8" w x 15 3/4" d, 50.7 lbs

TS-850S All-mode 100W 160-10M transceiver with 100kHz to 30MHz receiver. MARS modifiable. Dual VFOs, keypad frequency entry, 100 memories, multi-mode scanning. Speech processor, full/semi-break-in CW - fine tuning on CW. IF notch and audio filters. SSB slope tuning, CW keyer, dual noise blanker, squelch, RTT/XIT. Hand microphone supplied. Optional internal antenna tuner, ext. DSP Processing, and AC supply. 12V DC -20A. 13" w x 4 1/4" h x 13 1/8" d, 24 lbs.

TS-850S/AT same, but built-in antenna tuner.

TS-450S All mode 100W 160-10M transceiver with 500kHz-30MHz receiver. Dual VFOs, keypad entry. 100 multi-function memories, multi-scan functions. Speech processor, dual noise blankers. RTT/XIT IF shift, AF notch filter. Digital bar meter. Optional internal 80-10M automatic antenna tuner, external DSP and external mobile antenna tuner. 10 1/2" w x 3 3/4" x 12" d, 13.9 lbs.

TS-450S/AT same, but built-in antenna tuner. **TS-690S** same as TS-450S, but includes 6-meters with 50W output.

TS-140S All mode 100W, 160-10M transceiver with 500kHz-30MHz receiver. VFO tuning or with up/down switches. Dual VFOs, 31 memories, programmable memory and multiple scanning capabilities. 10 memories store transmit and receive frequencies independently for repeaters. Programmable band marker, noise blanker, IF shift, RTT, speech processor with audio compression, QSK or semi break-in CW. 12V DC -20A. 4 1/4" h x 11" w x 12" d, 13 lbs.

TS-790A All-mode three-band VHF/UHF transceiver with 2m/440MHz standard; 1.2GHz is optional. 45/40W; 10W (1.2GHz). Keyboard entry plus dual VFOs for each band, and channelized for FM repeaters. Dual receive on 2M/440MHz, 2M/1.2GHz or 440/1.2GHz bands. Dual displays. 59 memories, scanning. Full duplex, doppler frequency correction for Oscar. Speech processor, IF shift, CW narrow filter. Optional computer control. 12V DC -15A. 4 3/4" h x 13" w x 13" d, 20 lbs.

TM-255A All-mode 2M transceiver. 144-148MHz coverage is modifiable for MARS/CAP. 100 memory channels plus 1 call channel. 40/5W output. DDS, built-in 9600/1200 baud packet capability. AIP, IF shift, noise blanker. DTSS and pager function, tone alert system with elapsed time indicator, S-meter squelch, all mode squelch, TXCO temp. compensated crystal oscillator. CTCSS encode; decode optional. 12V DC -13A. 2 1/4" h x 7" w x 8 1/2" d, 6 lbs.

TM-455A is same as TM-255A, but 430-440MHz.

FM Mobiles - 4 models feature: 20 multi-function memories, CTCSS encode, tone alert, timeout timer, auto power off. Band and memory scanning with selectable scan steps and memory channel lockout. 5 1/2" w x 1 1/8" h x 6 1/4" d, 2 1/2 lbs.

TM-241A 2 Meters: 144-148MHz tx, 118-173.99 rx, 50W • **TM-331A** 220MHz, 25W • **TM-441A** 440MHz, 35W • **TM-541A** 1.2GHz; 10W.

TM-251A 2M FM with 118-174MHz and 300-370MHz receive. 50W, 41 memories; up to 200 optional. Dual band receive, 1200/9600 bps packet compatible. Programmable VFO, full-duplex cross-band repeat. CTCSS encoder; decode opt., auto repeater offset, multiple scan modes. Large LCD with dimmer, CH display number. DTSS selective call with page, digital recording system, S-meter squelch, DTMF memories. 12V DC -11A. 1 1/4" h x 5 1/8" w x 6 1/8" d, 2.2 lbs. **TM-451A** same, but 440MHz tx/rx and 2M rx, 35W.

TM-742A 2 meter/440MHz dual/triple band FM transceiver. Optional band units for 1.2GHz, 220, 50 or 28MHz. 2m: rx 138-173MHz; tx 144-148MHz, modifiable for MARS/CAP. 440MHz: 438-449.995 MHz. Output: 2m (50W), 2m (35W.). Simultaneous 2m/440 receive. Direct entry from microphone. 100 memories/band, programmable memory and dual scanning with lockout and priority. CTCSS encoder, selectable full duplex, operates as a cross band repeater with mod. 12 VDC -11A. 2 1/4" h x 6 1/8" w x 8" d, 4 lbs. **TM-642A** covers 2M/220MHz, 50/25W. **TM-942A** 2m/440MHz-50/35W and 1.2GHz-10W.

TM-733A FM Dual Bander Covers 2m/440MHz with 118-174MHz 2M receive. 50/35W. Detachable front panel for security, optional kit for remote mounting of body. Clone function, 1200/9600bps packet compatible. 72 memories, dual receive on the same band, programmable scan, cross-band repeat. S-meter squelch, DTSS selective call with pager. AIP, auto simplex checker, automatic band change, dual channel watch. Encode built-in; decode optional. 12V DC -11A. 1 1/4" h x 5 1/8" w x 6" d, 2.6 lbs.

TH-22AT and TH-42AT FM Handhelds

Similar Features: Ultra compact! MOS FET low voltage power module, operates from 5-16VDC. 40 memories channels + one call channel, and odd offset capability in one. Selectable memory CH number mode. Multiple scanning functions; carrier or time-operated scan stop modes, busy channel lockout. DTSS with pager function, tone alert with elapsed time indication. DTMF memory function for autodial operation. CTCSS decoder built-in; decode optional, wireless cloning. Batt. saver, time out timer. 2 3/8" w x 4 3/8" h x 1" d, 9 oz.

TH-22AT 2 meters: 136-174MHz rx, 144-148MHz tx. 3.0W out; 5W w/12V or opt. battery

TH-42AT 440MHz: 438-450MHz tx and rx. 2.5W output; 5W w/12V or optional battery.

TH-28A and TH-48A FM Handhelds

Similar Features: Single band transmit, switchable dual-band receive for semi-duplex cross-band operation. MARS/CAP modifiable. Six character alphanumeric LCD display, 40 multi-function memories, memory paging, band or memory scanning. DTMF memory function for autodial operation. Tone alert system with time indicator. Digital clock, CTCSS encode/decode, timeout timer. 1.9" w x 4.6" h x 1.5" d, 12 oz

TH-28A 2 meters: 118-174MHz receive, 144-148MHz transmit + 438-450MHz UHF receive. 2.5W output, 5W with optional battery.

TH-48A 440MHz: 438-449.995MHz transmit and receive + 136-174MHz VHF receive. 2.0W output, 5W with optional battery.

TH-79A(D) FM Dual Bander

2m/440MHz; 144-148 tx, 118-174MHz rx and 438-450MHz tx/rx. Modifiable for MARS/CAP. High efficiency FET power module: 6V 2.5W out-2 meters, 2.0W out-440MHz; 5W out on both bands with 12V or optional battery. Dot-matrix alphanumeric LCD and menu system, CH display function. 82 non-volatile memory channels. Multiple scan modes, ID, DTSS and page functions. DTMF memory function for autodial operation. Full-duplex, cross band repeat, dual receive - simultaneously receive two frequencies even on the same band. Tone alert system with elapsed time indicator. Three selectable power levels, auto power off and battery saver. CTCSS encode/decode. 2 3/8" w x 5 3/8" h x 1.6" d, 11 oz.

TH-79A(D)H FM Dual Bander Same as TH-79A(D) above, except with 9.6V 600mA battery for approximately 5 watts output.

KENWOOD accessories - see p.p. 13 & 14

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Kenwood's TH-22AT/42AT: The Compact Solution!

144 MHz/450 MHz single band HTs

More Power !



Features

- 3-watt output from MOS FET power module and supplied 6-volt battery (TH-22AT: approx. 3 watts, TH-42AT: approx. 2.5 watts), and 5-watt output with optional PB-34!
- Compact design: 2-3/16 x 4-5/8 x 1 in.
- Built-in DTMF keypad with monitor
- Built-in DTSS page system ■ Large 1-7/16" speaker
- 41 EPROM channel memories (including 1 call channel)
- Multiple scan functions (VFO, call & memory)
- Carrier-operated & time-operated scan stop modes
- Tone alert with elapsed time indicator
- Battery-saver circuit and auto power-off function to extend battery life ■ Selectable squelch configuration
- RF output power control (Hi/Low/EL)
- Built-in CTCSS encoder, optional TSU-8 decoder (any tone can be stored in any channel)
- User-friendly menu system to customize your operating preferences ■ Easy to program and use
- Modifiable for MARS and CAP. Specifications guaranteed for amateur bands only. Permits required for MARS and CAP use
- Wide range of accessories to enhance operating convenience and enjoyment

Slim, compact, lightweight. These words describe the exterior of the new TH-22AT Series HTs. Rugged, innovative, sturdy. These words describe what is on the inside. Because, along with the beauty, this new series of HT has all the things you want in a portable communications package. Like a streamlined, easy to program interface, one touch controls and a simplified menu of functions that you can customize to suit your needs. Even a DTMF memory that stores five of your favorite 15-digit telephone numbers for autopatch use. Wide band receive - 136 to 173.99 MHz. A new, innovative microprocessor and final amplifier circuit enables a full five watts, while conserving battery power. (The supplied battery provides 3 watts.) Easy mobile operation with optional PG-3H cable.

As always, a full line of accessories is available to enhance your operating enjoyment!

See your favorite Authorized Kenwood Amateur Radio Dealer for all the details!

Modifiable for MARS/CAP use.
Permits required. Specifications
guaranteed for Amateur band only.

KENWOOD COMMUNICATIONS CORPORATION
AMATEUR RADIO PRODUCTS GROUP
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KENWOOD ELECTRONICS CANADA INC.
6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

KENWOOD

93ARD-0829

Low Drain, No Pain!

Clones! Clones!

Cloning allows you to copy all memory channel information from one TH-79A(D) to another TH-79A(D)

TH-79A (Deluxe) FM DUAL BANDER

Information at your fingertips. Everything you need to know about operating the new TH-79A(D) FM dual-band (144MHz/440MHz) can be viewed in its unique dot-matrix LCD with alphanumeric display. No need for the manual. In addition to this innovative guide function, the TH-79A(D) sports a user-friendly menu system, providing easy access to the many powerful features of this slim-line handheld transceiver. Such as 82 non-volatile memory channels with ID, DTSS and page functions, and a DTMF memory function for autodial operation. Full-crossband duplex operation is available, as is the ability to receive two frequencies on the same band (VHF+VHF or UHF+UHF) simultaneously. And thanks to the FET power module, long hours of operation are possible on one charge. With the TH-79A(D), transceiver technology enters the 21st century.

Features

NEW 5-WATT
VERSION NOW AVAILABLE

- 2.7 approx. output (144MHz), 2W approx. output (440MHz) 3mm MOS FET power module and supplied 6V battery; 5W approx. output using optional PB-34
- Dot-matrix LCD with menu/guide system
- 82 non-volatile memory channels with ID
- DTMF keypad with memory function
- DTSS (Dual-Tone Squelch System) with page
- Built-in CTCSS tone encoder/decoder
- Automatic band change
- Power-on call sign display
- Auto repeater offset (VHF)
- Wide-range flexible antenna
- Input overvoltage warning
- 3-position output power control
- Auto power-off and battery save function
- Time-out timer
- Memory channel lock-out (scan mode)
- Cross-band repeater function
- Page answer back function
- Channel display function
- Wideband receiver coverage, including AM receive on the aircraft band*
- Clone function
- Modifiable for MARS/EAP use**

*Specifications guaranteed for Amateur bands only.

**Permits required. Specifications guaranteed for Amateur bands only.

KENWOOD COMMUNICATIONS CORPORATION

AMATEUR RADIO PRODUCTS GROUP

P.O. Box 22745, 2201 E. Dominguez St., Long Beach, California 90801-5745

Customer support/Brochures (310) 639-5300

Repair Locations/Parts (800) KENWOOD Bulletin Board Service (BBS) (310) 761-8284

KENWOOD ELECTRONICS CANADA INC.

8070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

KENWOOD

MIL-SPECS/TOP SPECS!



Features

- 144-148 MHz TX, 118-174 MHz RX
- 50 watts RF output
- 20 multi-function memory channels
- Large LCD display with illuminated keys
- Full band scan, programmable band scan, memory scan with channel lock-out
- Time-operated & carrier operated scan modes
- Built-in selectable CTCSS tone encoder
- Auto repeater offset
- Tone alert with elapsed time indicator
- DTSS for selective calling and paging (with optional DTU-2)
- Timo-out timer
- Auto power-off with warning beeper
- Meets U.S. military standards for shock and vibration (MIL-STD 810C/D/E)*
- Modifiable for MARS/CAP use (permits required)

Pure and simple, the concept reads like this: "rock-solid performance with straitforward operation, at an affordable cost". And Kenwood's TM-241A (144MHz) FM mobile transceiver symbolizes this perfectly. Great looks and rugged construction are just the beginning. The TM-241A's user-friendly controls make mobile QSOs a snap, and a powerful 50-watt amplifier lets you work simplex with confidence or hit those distant repeaters. Reception specs are equally impressive: intermod characteristics have been improved² to reduce interference from strong adjacent band signals. Plus, there are 20 multi-function memory channels for programming combinations of frequency, sub-audible tone, and repeater offset.

So, if you're looking for true mobile performance, go back to the basics and reach for Kenwood's TM-241A.

These specifications guaranteed for Amateur band only.
*Current K&K2 versions with serial number 5080000 or later.

KENWOOD COMMUNICATIONS CORPORATION

AMATEUR RADIO PRODUCTS GROUP
P.O. Box 22745, 2201 E. Dominguez St., Long Beach, California 90801-3745
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KENWOOD ELECTRONICS CANADA INC.
6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

KENWOOD

Kenwood's TM-733A - Faster and Faster!



Features

- Max. 50W output (144MHz), 35W (440MHz)
- "6-in-1" programmable memory
- 72 memory channels
- Time-Operated & Carrier-Operated scan stop modes
- Dual receive on same band (VHF+VHF or UHF+UHF)
- Built-in DTSS selective calling with page
- ASC (Auto Simplex-Checker)
- Built-in CTCSS encoder & optional TSU-8 decoder
- Key function display ■ Automatic band change
- AIP (Advanced-Intercept Point) ■ Cross-band repeater
- Selectable frequency step (5, 10, 12.5, 15, 20 or 25kHz)
- Wireless clone function ■ Incremental MHz key
- S-meter squelch
- Tone alert system with elapsed time indicator
- Separate speaker terminals for each band (switchable)
- Auto repeater offset (144MHz)
- Repeater reverse switch & offset switch
- 3-position RF output power control
- Dimmer control ■ Auto power-off

TM-733A FM DUAL BANDER

1200
9600
packet compatible

Theft Deterrent

Kenwood's new FM dual bander, the TM-733A (144MHz/440MHz), is specially tailored for hassle-free mobile communications with a unique "6-in-1" programmable memory. Six entire operating profiles—including everything from frequency range to dimmer level—can be stored, ready for instant recall. So there's virtually no need to adjust your settings. The detachable front panel has a high-visibility LCD with key function display to make on-the-move operation even easier. Of course, this compact transceiver has a full complement of sophisticated features, including 72 memory channels, DTSS selective calling and page functions, ASC (checks whether you can switch from a repeater to simplex communications), AIP (Kenwood's exclusive circuit for enhancing RX performance), and a jack for 1200/9600bps packet use. And as well as receiving simultaneously on VHF and UHF bands, the TM-733A can receive two frequencies on the same band (VHF+VHF or UHF+UHF). There's even an optional quick-release kit as an added anti-theft measure. So check out the TM-733A—a sensation bred from inspiration.

*An optional accessory kit is required to mount the front panel separately from the main unit.

KENWOOD COMMUNICATIONS CORPORATION
AMATEUR RADIO PRODUCTS GROUP
P.O. BOX 22745, 2201 East Dominguez St., Long Beach, CA 90801-5745
KENWOOD ELECTRONICS CANADA INC.
6070 Kestrel Road, Mississauga, Ontario L5T 1S8

KENWOOD

Explore New Frontiers!

Advanced technology moves Kenwood's HF rigs to the top.

TS-450SAT/S • TS-690S

- 160m to 10m amateur band operation, 500kHz to 30MHz general coverage receiver • 6m amateur band and 50-54MHz general coverage receive (TS-690S)
- DDS (Direct Digital Synthesizer) & digital PLL system
- AIP (Advanced Intercept Point) system
- Automatic antenna tuner (built-in or optional)
- IF shift function tuning • AF notch filter
- Heavy duty cycle design • 100 memory channels



TS-850SAT/S

- 160m to 10m amateur band operation, 100kHz to 30MHz general coverage receiver • DDS (Direct Digital Synthesizer) & digital PLL system • AIP (Advanced Intercept Point) system
- Automatic antenna tuner (built-in or optional)
- IF slope tuning • IF notch filter
- Electronic message keyer circuit with weighting control
- 100 memory channels • Digital recording system (optional)



TS-950SDX

- 160m to 10m amateur band operation, 100kHz to 30MHz general coverage receiver
- Built-in DSP (Digital Signal Processor)
- MOS-type FET final section • Dual frequency receive
- 150W PEP output (SSB/CW/FSK/FM)
- DDS (Direct Digital Synthesizer) • Menu system
- AIP (Advanced Intercept Point) system
- Automatic antenna tuner • IF slope tuning • IF notch filter
- 100 memory channels • Built-in AC power supply



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AMATEUR RADIO PRODUCTS GROUP

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• Customer Support/Brochures (310) 639-5300

• Repair Locations/Parts (800) KENWOOD • Bulletin Board Service (BBS) (310) 751-8284

KENWOOD ELECTRONICS CANADA INC.

6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

KENWOOD

Kenwood's TS-50S : Awesome HF Versatility



TS-50S HF TRANSCEIVER

For the Amateur Radio enthusiast, going "beyond bounds" is what it's all about. That's why Kenwood created the TS-50S, the world's smallest and smartest HF transceiver. The choice is yours: you can mount it in a vehicle, take it on a DX-pedition, or even install it permanently as a base station transceiver. Yet despite its size, the TS-50S provides a maximum output of 100W and the sort of sophisticated features normally found only inside a shack. Take for example the 100 memory channels for independent storage of transmit/receive parameters, the microprocessor-controlled DDS with innovative "fuzzy" control, and Kenwood's own AIP for superior dynamic range. There's also a powerful menu system, IF shift and CW reverse mode for interference reduction, TF-SET, and a noise blanker--plus everything you need for split-frequency operations. So, if you want HF operation beyond bounds, check out the TS-50S at your favorite authorized Kenwood Amateur Radio Dealer today!

Features

- 500kHz-30MHz general coverage receiver
- DDS (Direct Digital Synthesizer) with fuzzy logic control
- Large LCD panel with digital bar meter
- Auto-mode capability
- Menu system
- AIP (Advanced Intercept Point)
- Switchable AGC Circuit (SLOW/FAST)
- All-mode squelch
- CW reverse mode
- Full break-in and semi break-in
- 20dB attenuator
- Multi-function microphone supplied
- RF output power control (100W, 50W, 10W)
- Optional 500Hz CW filter (YK-107C)
- Optional external antenna tuner (AT-50)
- Optional computer interface (IF-100)

93ARD-0807

KENWOOD COMMUNICATIONS CORPORATION
AMATEUR RADIO PRODUCTS GROUP
P.O. BOX 22745, 2201 East Dominguez St., Long Beach, CA 90801-5745
KENWOOD ELECTRONICS CANADA INC.
6070 Kestrel Road, Mississauga, Ontario L5T 1S8

KENWOOD

What's Amateur Radio worth to you?

You invest every year in equipment, antennas and other Amateur Radio accessories. You probably insure your gear because it's valuable and expensive to replace.

Is Amateur Radio valuable to you? Are your privileges worth protecting? And can you insure that the Amateur Radio you know and enjoy today will continue into the future? **Not alone.**

The American Radio Relay League is Amateur Radio's best representative wherever rules are made governing the Amateur Radio spectrum. **There is no other organization in the United States that works on behalf of Amateur Radio with Congress and the FCC.**

Today, the **ARRL** is your voice in all worldwide arenas where the allocation and management of radio spectrum are discussed.

Can the ARRL maintain a formidable presence in Amateur Radio matters? **Not alone.**

The key to a strong ARRL will always be our membership. Each member, simply by joining, plays a pivotal role in Amateur Radio decision-making and preservation.

Can you join another organization and receive a monthly magazine? Obviously, we think **QST** is your best choice for an Amateur Radio journal, but there are others. The question is: **Do you want more for your money than just a magazine each month?**

As an **ARRL Member** you'll receive **QST** and have access to "**Members Only**" benefits and services. Beyond the immediate benefits, your membership provides essential support to the **only US organization dedicated to fighting for Amateur Radio and for you.**

Is ARRL membership worth it? **Is Amateur Radio important enough to help insure its future? It's your decision.** Please fill out the membership application and mail it today.

Yes, Amateur Radio is important to me and I want to be part of its future. Please enroll me as an ARRL member and rush my first issue of QST and membership certificate.

Class of License _____ Call Sign _____ Date of Application _____
Name _____
Address _____
City _____ State _____ Zip _____

If you do not want your name and address made available for non-ARRL related mailings, please check here ☐

Please Check:

- ☐ Sign me up for a one-year membership at \$31.
☐ I'm eligible for a one-year, \$25, 65 years or older rate.
Proof of age in the form of a copy of my birth certificate or driver's license is enclosed.
☐ Payment Enclosed
☐ Charge to ☐ VISA ☐ MasterCard ☐ Amex ☐ Discover

Card Number _____

Expiration Date _____

Cardholder's Signature _____

To order by phone, call 1-800-32-NEWHAM

Family, Blind and Life Memberships available. If you are 21 years old or younger, a special rate may apply. Call or write ARRL HQ for details.

DUES SUBJECT TO CHANGE WITHOUT NOTICE

Spring/Summer, 1995 Yaesu Amateur Radio Equipment



YAESU
Performance without compromise.™



FT-990 HF Transceiver

A self-contained base station with space-saving, built-in AC power supply, the FT-990 is incredible on a crowded band. Only HF with dual digital SCAF, its plug-in board design and simple front panel provide pure QSO enjoyment.

Features

- Frequency coverage:
RX: 100 kHz-30 MHz
TX: 160-10 m Amateur Bands
- Built-in Dual Digital Switched Capacitance Filters (SCAF)
- Built-in High Speed Antenna Tuner w/39 Memories
- RF Frequency-Shift Speech Processor (FSP)
- Dual VFOs w/Direct Digital Synthesis (DDS)
- 90 Memory Channels store Frequency mode and Bandwidth
- Band Stacking VFO System
- Full and Semi Break-in CW Operation
- Multi-mode Selection on Packet/RTTY; Interface to TNCs
- Adjustable RF Power
- Variable Threshold Noise Blanker
- Optional Digital Voice Recorder (DVS-2)
- Front Panel RX Antenna Selection
- DC Version Available without Power Supply



FT-900AT Compact HF Transceiver

The first HF to go mobile in any vehicle or stay at home as a compact base station. Its remote front panel design and unique Omni-Glow™ LCD display, plus performance and ease of operation in one small package, makes this transceiver the right choice for you.

Features

- Frequency coverage:
RX: 100 kHz-30 MHz
TX: 160-10 m Amateur Bands
- Built-in Auto Antenna Tuner
- Direct Keypad Entry when used as a Base Station
- Omni-Glow™ LCD Display
- 100W on SSB, CW, FM modes; 25W on AM
- IF Shift and 30dB Notch Filter
- Digital S/R, SWR, & ALC Meters
- Direct Digital Synthesis (DDS)
- Programmable CTCSS Encode w/Repeater Offset
- 100 Memory Channels
- CW Full Break-in Keying w/Adjustable Speed
- Fast/Slow AGC Circuit
- Intercept Point Optimization (IPO)
- Duct Flow Cooling System
- Twin Band Stacking VFOs
- Built-in Noise Blanker
- Built-in Adjustable Speech Processor



FT-1000 HF Transceiver

Judged "best overall" by top DX'ers worldwide, the FT-1000 delivers optimum receiver performance and real "muscle" on transmit. It's a perfect blend of electronics and human engineering with a dramatic front panel featuring two flywheel-weighted tuning knobs and two large displays. Hear signals you've never heard before with the FT-1000.

Features

- Frequency coverage:
RX: 100 kHz-30 MHz
TX: 160-10 m Amateur Bands
- RF Output Power Up to 200 Watts
- True Cross-band Dual Receive:
Two Large Tuning Knobs
- Front Panel RX Antenna Switch;
For Beverage or Loop
- Built-in Antenna Tuner
w/32 Memories
- Direct Digital Synthesis (DDS)
- 100 Memory Channels:
Independent ATU and Mode/IF
Filter Memory
- CW Spot and Two CW Key Jacks
for Maximum Convenience
- Dynamic Range: 108 dB
- Optional Digital Voice Recorder
(DVS-2): 16 Sec. each RX/TX
- FT-1000D Deluxe version
available



FT-840 Compact HF Transceiver

A wealth of features and high-tech performance in the field or mobile, this HF won't break your budget. With its new intense LCD display, die-cast heat sink and internal thermally switched antenna, you'll take this perfect companion with you everywhere.

Features

- Frequency coverage:
RX: 100 kHz-30 MHz
TX: 160-10 m Amateur Bands
- Direct Digital Synthesis (DDS)
- IF Shift
- 100 Memory Channels
(Independent TX/RX per memory)
- Twin Band Stacking VFOs
- FM Repeater Operation
- Automatic 10-Meter Repeater
Offset w/Selectable CTCSS Encode
- CW Reverse Feature
- Choice of Two Optional
Antenna Tuners:
FC-10 Matching External
Antenna Tuner
FC-800 External Remote
Antenna Tuner



FT-736R Multi-Mode VHF/UHF Full Duplex Base

Designed to meet the needs of the most demanding VHF/UHF and satellite operators, the FT-736R covers up to four of the 50, 144, 220, 430 MHz and 1.2 GHz bands with installable band modules. The FT-736R can be powered from 13.5 VDC or its built-in AC power supply.

Features

- Frequency coverage:
2 m: 144-148 MHz
70 cm: 430-450 MHz
- 100 Memory Channels
- Full Cross-band Duplex with
Inverted Tracking for AO-13
- Easy Interface to TNC via
Data In/Out Jack
- Independent Linear Amplifier
Relay Control Lines (Each Band)
- Optional modules for 50-54 MHz,
222-225 MHz and 1240-1300 MHz
- RF Output Power:
25 Watts on 144, 222, 430 MHz
10 Watts on 50 and 1240 MHz

FT-5100

Dual Band Mobile

Compact with a built-in antenna duplexer the FT-5100 defined "dual band" with two, 2-meter RX frequencies or two UHF frequencies. Not only is the FT-5100 the smallest dual band made, it's the only one that comes with its own backlit DTMF Mic. An unbeatable combination!

Features

- Frequency coverage:
 - 2 m: RX: 130-174 MHz
TX: 144-148 MHz
 - 70 cm: RX/TX: 430-450 MHz
- 94 Memory Channels (47 per Band), Odd Splits On Any Memory
- Dual In-Band Receive (V/V, U/U or V/U Receive Operation)
- DTMF Paging and Coded Squelch
- Packet Radio TNC Jack Built-in to Back of Radio
- CTCSS Encode Built-in (Decode Optional)
- Dual Receive with Balance Control
- Full Duplex Cross Band Operation
- Built-in Cross Band Repeat
- Built-in Antenna Duplexer
- Backlit DTMF Mic
- Automatic 8 Level Display Dimmer
- RF Output Power:
 - 2 m: 50/5 Watts (high/low)
 - 70 cm: 35/5 Watts (high/low)

FT-8500

Dual Band Mobile

This top-of-the-line, compact FM mobile includes extraordinary new features. Like Spectra-Analyzer™ to view station activity above and below a frequency, or within memory banks, and the FS-10 Smart Controller™ Microphone, for transceiver control in the palm of your hand. The next generation is here!

Features

- Frequency coverage:
 - 2 m: RX: 110-180 MHz
TX: 144-148 MHz
 - 70 cm: RX: 420-470 MHz
TX: 430-450 MHz
- Built-in Spectra-Analyzer™
- 6-Character Alpha-Numeric Display
- FS-10 Smart Controller™ Microphone
- 110 Memories (in 5 memory banks)
- Omni-Glow™ Display
- Digital Battery Voltage Display
- Dedicated Packet I/O jack (1200/9600 baud)
- 3-Level Auto-Mute with Mute Timer
- AM Aircraft Receive (110-136 MHz)
- V+V, U+U or V+U Dual Receive
- 3 Selectable Power Output Levels
 - 2 m: 50/10/5 W
 - 70 cm: 35/10/5 W
- Auto Power Off (APO) and Time-out Timer (TOT)
 - 10-Memory DTMF Autodialer
 - Cloning Feature
 - 5 Scanning Modes including new Clear Scan
 - Selectable Scanning Speed
 - Cross-band and One-way Repeat
 - Dual Speaker Jacks
 - Easy-to-Understand Feature Menu

FT-2200/7200

2-M/70-cm Mobiles

The mobiles that fit in anyplace. Smaller, sleeker and first with 3 power levels stored in each memory. The FT-2200 (and FT-7200) is designed to fit into today's more compact cars and comes with more memories than any competing model. You just won't leave home without it.

Features

- Frequency coverage:
 - FT-2200 RX: 110-180 MHz
TX: 144-148 MHz
 - FT-7200 RX/TX: 430-450 MHz
- 50 Memory Channels
- AM "Aircraft" Receive (110-139 MHz)*
- Built-in DTMF Paging and Coded Squelch
- Backlit DTMF Mic
- Small Compact Size
- RF Output Power (Stored in Each Memory):
 - FT-2200 50/20/5 Watts (high/med/low)
 - FT-7200 35/15/5 Watts (high/med/low)

* FT-2200



FT-5100

FT-8500



FT-2500M/7400H

2-M/70-cm Mobiles

Nothing is tougher than the FT-2500M (and FT-7400H) when rough and rugged mobile is the call. Huge LCD Display and backlit DTMF Mic make night-time operation safer. The FT-2500M is the first 2-meter amateur radio to be awarded a MIL-STD 810 rating for shock and vibration. Performance and strength for mobile or base station operation.

Features

- Frequency coverage:

FT-2500M	RX:	140-174 MHz
	TX:	144-148 MHz
FT-7400H	RX/TX:	430-450 MHz
- 31 Memory Channels, Odd Splits On Any Memory
- Alpha Numeric Display
- Advanced Track Tuning (ATT)
- Automatic Display Dimmer
- True FM Modulation
- Backlit DTMF Mic
- CTCSS Encode Built-in (Decode Optional)
- Five Scanning Functions
- 3 Selectable Output Power Levels
 FT-2500M 50/20/5 Watts
 FT-7400H 35/15/5 Watts

FT-290/690/790RII

VHF/UHF Multi-Purpose Mobiles

Just sling it over your shoulder and go. To the top of the mountain or that remote campsite. True field operation performance for fun or serious emergency situations.

Features

- Frequency coverage:
 FT-290RII RX/TX: 144-148 MHz
 FT-690RII RX/TX: 50-54 MHz
 FT-790RII RX/TX: 430-450 MHz
- RF Output Power:
 FT-290RII 25 Watts (2 Watts Portable)
 FT-690RII 10 Watts (2 Watts Portable)
 FT-790RII 25 Watts (2 Watts Portable)
- All Mode Operation USB, LSB, CW, FM



Backlit DTMF Microphone

Exclusive to Yaesu, and included with every FM mobile sold, this backlit mic helps to insure safe autopatch operation in dim light and during night-time use. Designed for ease of use, the large keypad is invaluable. May be purchased separately. See Yaesu Amateur Products Accessories and Options Brochure for exact model number fitting your mobile.

Remote Control Wireless Mic

MW-2 (FT-5100/5200/6200/2200/7200)

No tangled cords to worry about, just step away from your mobile rig and talk. Perfect for "backseat" drivers or navigators. Available as an accessory.



FT-2200



FT-290RII



FT-2500M

FT-530

Dual Band Handheld

This handful of exclusive features includes dual in-band receive on VHF or UHF, Dual CTCSS Decode, Transmit Battery Saver, built-in VOX and 82 memory channels. More than any other HT radio in its class. The FT-530 has no equal!

Features

- Frequency coverage:
 - 2 m: RX: 130-174 MHz
TX: 144-148 MHz
 - 70 cm: RX/TX: 430-450 MHz
- 82 Memory Channels
- 4 TX Output Power Levels:
 - w/FNB-25: 2.0/1.5/1.0/0.5 Watts
 - w/FNB-27: 5.0/3.0/1.5/0.5 Watts
- Dual In-band Receive (V/V, U/U or V/U)
- DTMF Paging and Coded Squelch
- Auto On-Timer with Built-in Clock and Alarm Function (AOT)
- Automatic Battery Saver (ABS)
- Digital Battery Voltage Readout
- CTCSS with Dual Decode Built-in
- Automatic Tone Search (ATS)
- Backlit Keypad and Display w/Time Delay
- Built-in Cross-band Repeat Function
- Automatic Power Off (APO)
- 5 Watts Output w/FNB-27 Bat. or 12 VDC
- Built-in VOX



MH-29A2B

Display Speaker Mic

LCD Display mic with remote functions for hassle-free mobile operation. (For use with FT-530 and FT-51R.)

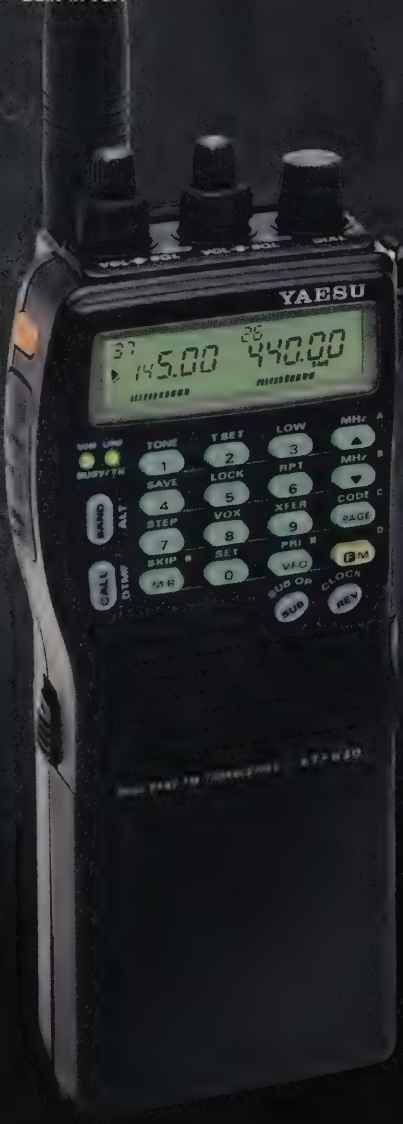
FT-51R

Dual Band Handheld

The first dual band HT with scrolling instruction menu "windows"! Spectrascope™ too, for continuous real time activity scanning in VFO or 8 user-choice memories.

Features

- Frequency coverage:
 - 2 m: RX: 110-180 MHz
TX: 144-148 MHz
 - 70 cm: RX: 420-470 MHz
TX: 430-450 MHz
- 120 Memory Channels (80 w/Alpha-Numeric)
- Spectrascope™ LCD Display
- Scrolling User Help Menu
- 8 Character Alpha-Numeric Display
- Up/Down Volume/Squelch Controls & Display
- Selectable Sub-Band TX Mute
- Automatic Tone Search (ATS)
- Digital Battery Voltage Display
- AM Aircraft Receive
- Scanning Light System (SLS)
- Large Backlit Keypad & Display
- Automatic Repeater Shift (ARS)
- Multiple Scanning Modes
- 3 Selectable Scan Stop Modes with Scan Skip
- User Selectable Lock Function w/15 Combinations
- Automatic Power Off (APO)
- TX/RX Battery Savers Built-in
- Handy Cloning Feature
- 5 Selectable Power Output Levels
- Message System with CW ID
- Selectable RX Smart Mute™
- Cross-Band & One-Way Repeat Functions
- DTMF Paging/Coded Squelch Built-in
- 3 Dual Receive Configurations - VHF/VHF, UHF/UHF, & VHF/UHF



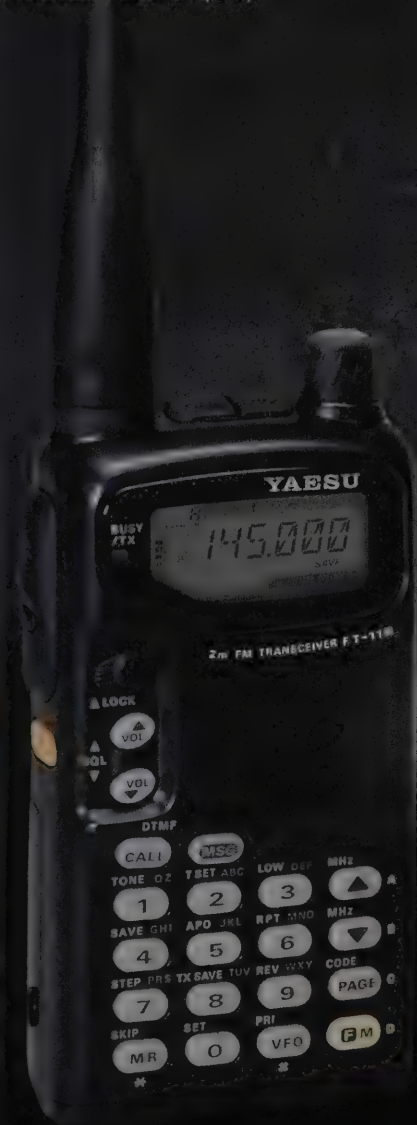
FT-11/41R

2-m/70-cm Handhelds

World's smallest size HT with a full sized keypad. You'll wonder how we did it, till you remember Yaesu pioneered 2-way radio micro technology. It's full-featured and pencil thin with a 4.8V battery for 1.5 watts on TX. Just punch up the exclusive backlit DTMF keypad and Volume/Squelch control, set the alpha numeric display and start talking!

Features

- Frequency coverage:
 - FT-11R 2 m: RX: 110-180 MHz
TX: 144-148 MHz
 - FT-41R 70 cm: RX: 420-470 MHz
TX: 430-450 MHz
- Selectable Alpha Numeric Display
- Compact Battery Design
 - 4.8V produces 1.5 Watts
 - 9.6V produces full 5 Watts
- 150 Memory Channels
(75 when Alpha Numeric)
- AM "Aircraft" Receive (110-136 MHz)
- Small Size: 4"H x 2-1/4"W x 1"D
- Automatic Battery Saver (ABS)
- MOS FET Power Module
- Backlit DTMF Keypad and Display
- Backlit Up/Down Volume/Squelch Controls
- DTMF Paging/Coded Squelch
- Automatic Power Off (APO)



FT-411E/911

Compact FM Handhelds

For FM performance under strenuous climatic conditions, the FT-411E (and FT-911) stands up like the champ it is. Features and durability make this radio the choice of amateurs worldwide.

Features

- Frequency coverage:
 - FT-411E 2 m: RX: 130-174 MHz
TX: 144-148 MHz
 - FT-911 23 cm: RX/TX: 1240-1300 MHz
- 49 Memory Channels
- CTCSS Encode/Decode Built-in
- Built-in VOX
- Backlit Keypad and Display
- Automatic Power Off (APO)
- Programmable Battery Saver
- Multiple Scan Modes



FT-23/33R

VHF/UHF FM Handhelds

Ultra compact and microprocessor controlled, these HTs offer the convenience of small size yet simple operation. Designed for years of rugged use, housing will withstand a standard EIA drop test without a problem.

Features

- Frequency coverage:
 - FT-23R 2 m: RX: 140-150 MHz
TX: 144-148 MHz
 - FT-33R 1.25 m: RX/TX: 222-225 MHz
- 10 Memory Channels
- Simple Operation
- Multiple Scan Modes
- Rugged Die-cast Frame



W R T H
BEST RECEIVER 1992



Rotators

You're looking at the only rotators manufactured by a major amateur radio communication company.

Who better to determine the best specifications and durability for precision amateur radio performance under all circumstances. Smooth and quiet without noisy wedge brakes, these rotators are housed in weatherproof, die-cast aluminum enclosures

permanently lubricated for maintenance-free operation and years of service. Compatible with most U.S.A. made antenna tower accessory shelves, Yaesu rotators come with a One-Year Warranty.

Computer Controllers

Computer controllers for rotators now available. GS-23 Computer Controller for Rotators: G-800SDX, G-1000SDX, G-2800SDX. GS-232 Computer Controller for Satellite Rotator: G-5400B.

G-450XL

A new entry-level rotator priced low, for light to medium duty antennas. Maximum antennas wind load, 10 sq. ft.

Model	Application	Mast Size	Rotator Size	Pre-sets	Wind Load
G-450XL	Light/medium-duty	1½-2 inches	12½"H x 7½" Dia.	No	10 Sq. Ft.
G-800S	Medium-duty	1½-2½ inches	12½"H x 7½" Dia.	No	17 Sq. Ft.
G-800SDX	Medium-duty	1½-2½ inches	12½"H x 7½" Dia.	Yes	17 Sq. Ft.
G-1000SDX	Heavy-duty	1½-2½ inches	12½"H x 7½" Dia.	Yes	23 Sq. Ft.
G-2800SDX	Extra Heavy-duty	1½-2½ inches	13½"H x 8" Dia.	Yes	34 Sq. Ft.
G-5400B	Azimuth-Elevation Rotator combination	1½-2½ inches (Boom Dia. 1¼-1½ in.)	Mounted together 12½"H x 7½" Dia.**	No	11 Sq. Ft.
G-500A	Elevation only	1½-2½ inches (Boom Dia. 1¼-1½ in.)	10½"H x 7½" Dia.	No	12 Sq. Ft.

Accessories: CG-038 Mast Clamp, CG-048 Mast Clamp, GS-050 Thrust Bearing, GS-065 Thrust Bearing. Not Shown: G-800S, G-800SDX, G-1000SDX.

*Wind load ratings are valid when rotator is mounted in tower.

**Rotator size mounted together.



VHF/UHF REPEATERS

VXR-5000V
135-148 MHz 25 Watt

VXR-5000U
400-450 MHz 25 Watt

These compact synthesized DC-powered repeaters are manufactured by Yaesu for their Vertex Radio Communications commercial product line. Now available for amateur use. The repeaters can be wall mounted or installed in a standard 19" rack. (Optional mounting kit required.)

Specifications	
Frequency Coverage	135-148 MHz or 430-450 MHz
Power Output	2-25 Watts @ 100% duty cycle
Current Consumption	7.0A @ 13.8 VDC
Frequency Stability	5 ppm
Programmable Features	Frequency, CTCSS, Hi/Low Power levels, Hang timer, Time-out timer
Programming	Optional VX VPL-1 programming kit

FRG-100

Communications Receiver

Winning the prestigious 1992 World Radio TV Handbook award for "Best Communications Receiver" when introduced is reason enough to make the FRG-100 your receiver. And if that's not enough, consider its industry-exclusive features like adjustable SSB carrier offset and user selectable 10 Hz, 100 Hz or 1 kHz tuning steps. Or the exciting Broadcast Band mode with 16 pre-programmed international broadcast bands. Even 50 memory channels and twin 12/24-hour clocks to keep you tuned in where and when you like - day or night! Join the experts and make the FRG-100 your "best communications receiver", too.

Features

- Frequency coverage: 50 kHz-30 MHz
- 50 Memory Channels
- Twin 12/24-Hour Clocks
- User Selectable Bandwidths
- Alarm and Timer Functions
- Dual Antenna Jacks (Coax and Open Wire)

Accessories

FM Unit-100: FM Receiver Unit
 TCXO-4: Temperature Compensated Crystal Oscillator
 PA-11B: 117 V AC Adapter
 PA-11C: 220 V AC Adapter
 YF-110C: CW Filter (500 Hz)
 YF-110CN: CW Narrow Filter (250 Hz)

Specifications

Frequency Range	50 kHz-30 MHz
Mode	USB, LSB, CW, AM, FM (optional)
Dimensions (W x H x D)	9 1/4 x 3 3/8 x 9 5/8 inches 238 x 93 x 243 mm

G-2800SDX

The new top of the line rotator for extra heavy duty antenna installations. Maximum antenna wind load, 34 sq. ft.

NEW

G-500A

Elevation rotator for space communication antennas. Maximum antenna wind load, 12 sq. ft.

G-5400B

Azimuth-Elevation combination for space communication antennas. DIN connection provided for computer operation. Maximum antenna wind load, 11 sq. ft.

G-500A

ELEVATION INDICATOR

YAESU

ELEVATION-AZIMUTH DUAL CONTROL ROTATOR - G-5400B

YAESU

NEW

vertex

vertex

NEW
Dual Band HT

Dual Band Handheld FT-51R

Only one Dial/Volume knob required for easier use.

The First Dual Band HT with **WINDOWS!**

Three dual receive configurations VHF/VHF, UHF/UHF, or VHF/UHF with main band frequency on right or left side. Flexible programming allows transmit on main or sub band.

An 8 character alpha-numeric user help menu scrolls operation instructions in the bottom of the large, backlit display.

MH-29A2B
LCD Display Mic
with Remote
Functions.
(Optional)

The new FT-51R Dual Band HT is state-of-the-art, and easy to use!

So easy, you won't need an operating manual. Its exclusive, scrolling instruction menu located in the large, backlit display "window", guides you through total operation while simultaneously viewing the main display window.

You'll like some of the other new, exclusive features, too. Like Spectrascope™. This unique feature displays real time, continuous scanning of activity on adjacent frequencies in VFO mode or 8 of your favorite

memories. A cloning feature duplicates favorite channels to another FT-51R.

A digital battery voltage display, five power output levels, the largest backlit dual band HT keypad made, Smart Mute™, two VFOs on both VHF and UHF as well as available 2 Watt and 5 Watt versions, round out the exciting FT-51R. Plus, the optional MH-29A2B Display Microphone allows you to control volume and also access Memory, VFO, Call Channel, Band Selection and scanning functions. All of this in world's smallest dual band HT radio!

See the FT-51R with "windows" at your Yaesu dealer today!

"I use the Spectrascope to find new contacts faster."

"Yaesu did it again!"

Digital battery voltage readout displays condition of battery in use. Scan skip function allows individual memory channel lock-out during scanning mode.

Spectrascope™ displays active adjacent frequencies in real time with relative signal strength.

Specifications

- Frequency Coverage
VHF RX: 110-180 MHz
TX: 144-148 MHz
UHF RX: 420-470 MHz
TX: 430-450 MHz
- Spectrascope™ Display
- Scrolling User Help Menu
- Alpha-Numeric 8 Character Display
- Up/Down Volume/Squelch Controls & Display
- Selectable Sub-Band TX Mute
- Automatic Tone Search (ATS)
- Digital Battery Voltage Display
- AM Aircraft Receive
- Scanning Light System (SLS)
- 120 Memory Channels (80 w/Alpha-Numeric)
- Large Backlit Keypad & Display
- Automatic Repeater Shift (ARS)
- Multiple Scanning Modes
- 3 Selectable Scan Stop Modes with Scan Skip
- User selectable lock function w/15 combinations
- Automatic Power Off (APO)
- TX/RX Battery Savers Built-in
- Handy Cloning Feature
- 5 Selectable Power Output Levels
- Message system with CW ID
- Selectable RX Smart Mute™
- Cross-Band & One-Way Repeat Functions
- DTMF Paging/Coded Squelch Built-in

Accessories
Consult your local dealer.

YAESU
Performance without compromise™

© 1994 Yaesu USA, 17210 Edwards Road, Cerritos, CA 90703 (310) 404-2700

Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.

**NEW
DUAL BAND**

Dual Band Mobile **FT-8500**

Never before has Yaesu technology changed an industry so dramatically.

"With the Smart Controller Mic, all the radio functions are in your hand."

"And, look, the digital voltage display monitors my car battery voltage!"



"Spectra-Analyzer lets me check out channel activity in UHF, VHF, and keep track of my favorite repeaters, too."

"Yaesu did it again!"

Specifications

- **Frequency Coverage:**
2m RX: 110-174 MHz
TX: 144-148 MHz
70 cm RX: 420-500 MHz
TX: 430-450 MHz
- Spectra-Analyzer™ w/adjustable signal width, spacing & span markers
- 6-Character Alpha-Numeric Display
- 110 Memories (in 5 memory banks)
- Omni-Glow™ Display
- Digital voltage display
- Selectable 1200/9600 baud
- 3-Level Auto-Mute w/Mute Timer
- V+V, U+U, V+U Dual Receive
- 3 Power Output Levels
2 m 50/10/5 Watt
70 cm 35/10/5 Watt
- Built-in Auto Power Off (APO) and Time-out Timer (TOT)
- MIL-STD 810/C Rating
- 9 Memory DTMF Autodialer
- Handy Cloning Feature
- 3 Scanning Modes w/ Clear Scan
- Adjustable LCD Contrast/Brightness Control
- **Accessories:**
Consult your local Yaesu dealer.

Rear-panel data jack for packet with 6-pin connections for Data Input, PTT, 9600 bps and 1200 bps Receive Data, Squelch Status, Ground.

ACTUAL SIZE
140x40x160mm (5.6"x1.6"x6.4")

Omni-Glow™ LCD Dual-Band Display



VHF&VHF, UHF&UHF, VHF&UHF
Select three dual band configurations. Menu loop contains 13 headings and 53 transceiver settings. Shown with custom 6-character alpha-numeric code.



Spectra-Analyzer™ displays station activity above and below the current operating channel. In Memory Recall, display signal strength of programmed channels.



Built-in digital voltage display monitors automobile battery voltage. Menu-Selectable Packet Baud Rate. Choose 1200 or 9600 bps.

Rotary Dial Selector Knob
Select memories and other settings according to the current mode functions.



The FT-8500 and Smart Controller™ Microphone demonstrates Yaesu's world leadership position in 2-way radio communication again! With just four simple flicks of the Smart Controller™ Microphone "joystick"-type lever, you command over 50 separate functions from the palm of your hand! The FT-8500 defines "high-tech" in mobile radio engineering.

The Smart Controller™ Microphone

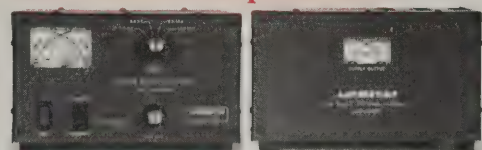
isn't the only engineering advancement. Watch the unique Spectra-Analyzer™ exhibit station activity above and below your current operating channel, and the digital voltage readout monitor your car battery voltage big and bold in the Omni-Glow™ display. In V+V, U+U or V+U view frequencies and custom alpha-numeric messages at the same time. Other features include handy cloning, selectable 1200/9600 baud, and a rear-panel data jack for packet! All of

this and more in the deluxe, compact FT-8500.

The extraordinary FT-8500 Dual Band Mobile is at your Yaesu dealer now. Find out how this dramatic change will affect mobile technology for you from this day forward.

YAESU
Performance without compromise.™

HF Power Amplifiers...



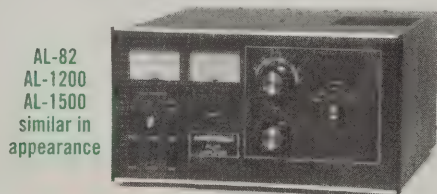
► **AMERITRON ALS-600** No tune, solid-state FET linear with continuous coverage 1.5-22MHz; 10/12M with easy-to-install optional kit*. 100W drive for 600W PEP SSB, 500W CW output. Illuminated Cross-Needle SWR/Wattmeter, SWR and overload protection, front panel ALC control. Transmit, ALC, SWR LED indicators. Includes separate 110/220V power supply. Both units are 6" h x 9" w x 12" d, 48 lbs (total) **\$1099**



► **AMERITRON ALS-500M** No tune, solid-state FET linear that is ideal for mobile operation. Continuous coverage 1.5-22MHz; 10/12M with easy-to-install optional kit*. Four 25CC2879's deliver 500W PEP SSB, 400W CW with less than 100W drive. Illuminated Cross-Needle SWR/Wattmeter, SWR and overload protection, remote ON/OFF control. Requires 13.8VDC-80A peak for PA, and separate 12-15VDC-4A for control and bias circuits. 3 1/2" h x 9" w x 15" d, 7 lbs **\$679⁹⁵**



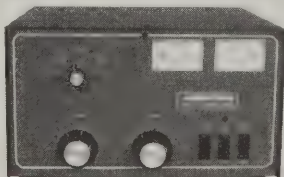
► **AMERITRON AL-80B** Desktop linear amplifier. Covers 160-15M including WARC and MARS; modifiable for 10/12 meters*. Single 3-500Z; 85W drive, 1KW PEP SSB/850W CW output. Dual illuminated cross-needle meters, QSK compatible, built-in 110/220V supply. 14" w x 8" h x 15" d, 52 lbs **\$1069**



► **AMERITRON AL-82** Full legal output! Covers 160-12M; owner modifiable for 10M*. Uses two Eimac 3-500Z tubes and CW/RTTY or SSB bias settings. 100W drive, 1500W continuous output. Built-in power supply with heavy-duty Hypersil® transformer, 220V-15A. 10" h x 17" w x 18" d, 76 lbs **\$1769**

► **AMERITRON AL-1200** Full legal output! Covers all ham bands 1.8-21MHz + WARC bands; owner modifiable for 10M*. Single Eimac 3CX-1200A7 ceramic tube requires 100W drive for 1500W output. Heavy silver-plated tank components, built-in heavy-duty power supply with Hypersil® transformer, 220V-15A. 10" h x 17" w x 18" d, 83 lbs **\$1829**

► **AMERITRON AL-1500** Full legal output! Covers 160-12M; owner modifiable for 10M*. Uses a single Eimac 887Z ceramic tube to deliver 1500W+ output with only 65W drive. Heavy-duty built-in power supply with Hypersil® transformer, 220V-15A. 10" h x 17" w x 18" d, 77 lbs **\$2249**

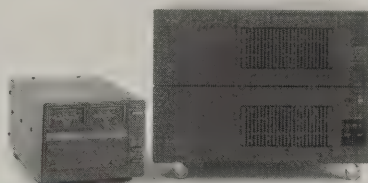


► **AMERITRON AL-811** Low cost Desktop linear! Covers 160-12M; owner modifiable for 10M*. Uses three 811A tubes with tuned input to deliver 600W PEP SSB/500W CW output with 75W drive. Vernier drive plate tuning, illuminated grid and plate voltage/current meters, adjustable ALC. Built-in 110/220V power supply. 16" d x 13" w x 8" h, 40 lbs **\$589⁹⁵**

► **AMERITRON AL-811H** Similar to AL-811, but uses four 811A tubes for 800W PEP SSB output with 75W input **\$719⁹⁵**



► **ICOM IC-2KL** Solid-state, broadband/no tune-up linear amplifier. Covers 160-15M. 50-80W drive provides 600W PEP SSB and 500W CW output. Separate power amplifier and power supply units. Automatic band switching operation when using with an ICOM transceiver. 110V-20A (220V with modification). Both units are: 4 1/2" h x 9 1/2" w x 15 1/2" d, 45 lbs (total) **CALL**



► **ICOM IC-4KL** Solid-state, broadband/no-tune-up linear with separate controller and RF units. Covers 160-12M. Four 8 transistor modules, 100W drive produces 1000W output (one-hour at full duty cycle). Built-in automatic antenna tuner with memory and 40V-60A power supply. QSK full-break-in CW operation. Dual meters show SWR, final amplifier current and temperature, and output. Automatic operation with ICOM transceivers. 110V or 220V-18A (recommended). Controller: 5 1/2" h x 7 1/2" w x 13 1/2" d, 66 lbs. Amplifier: 11 1/2" h x 16 1/2" w x 18" d, 79 lbs **CALL**



End of an Era!

*Your Last Chance
to buy one of
these Beauties...*

► **KENWOOD TL-922A** Maximum legal power linear amplifier. Covers 160-15M; user modifiable for 10M*. Uses two Eimac 3-500Z tubes in class AB₂ grounded grid circuit requiring only 80W drive to produce 1500W PEP SSB output. Features rugged, heavy-duty electrical and mechanical construction of the highest quality, and convenient recessed lifting handles. Built-in 110/220V AC power supply. 15 1/2" h x 7 1/2" w x 16 1/2" d, 83 lbs **Closeout \$1869⁰⁰**



► **VECTRONICS HF-600QSK** Kilowatt desktop linear amplifier. Covers 160-15M including WARC and MARS operation; user modifiable for 10M*. Class AB₂ grounded grid circuit, 880Z carbon anode (3-500Z type) zero-bias triode. Tuned input, 60W drive for 600W output - continuous duty SSB, 50% other modes. Cross needle metering system, adjustable ALC, vernier tuning and loading, high speed dual vacuum relay system for CW, AMTOR, RTTY. 7 1/2" h x 14" w x 16 1/2" d, 35 lbs **\$1595**



► **YAESU FL-7000** Solid-state, broadband/no tune-up linear amplifier with built-in automatic antenna tuner and power supply. Covers 160-12M, owner modifiable for 10M*. Only 70W drive for 600W output. SSB duty cycle - 30 minutes; full carrier - 2 minutes. Full break-in for CW, HF Packet and AMTOR modes. Tuner memory holds settings and antenna selection. Circuit automatically turns off amplifier and attempts to rematch if SWR exceeds 2:1. Automatic selection of four different antennas with optional unit. Automatic band change when used with YAESU transceivers; interface cables for the various models are optional, see price list. 110/220V. 5" h x 15" w x 15" d, 60 lbs **CALL**



RF Concepts VHF/UHF Amps

- Single / Duoband models
- FM/CW/SSB modes
- GaAs FET preamplifier
- Overdrive protection
- 12VDC • 1-yr warranty



Model	input	output	amps	Price
2-meters				
2-23	0.2-5W	30W @ 2W in	5	\$139⁹⁵
2-315	30-50W	150-170W	25	289⁹⁵
VHF 1-60*	1W	60 @ 1W in	10	229⁹⁵
2-417	0.2-50W	170W @ 45W in	22	289⁹⁵
220MHz				
3-22	5W	20W	4	\$139⁹⁵
3-211	2W	110W	22	319⁹⁵
3-112	0.2-15W	120W @10W in	12	319⁹⁵
3-312	30W	120W	22	299⁹⁵
440MHz				
4-32	3W	20W	4	\$149⁹⁵
4-110	10W	100W	22	359⁹⁵
4-310	30W	100W	20	329⁹⁵
UHF-50*	3W	50W	10	269⁹⁵
Dual Band - 2m/440 MHz				
2/70*	(3W) (5W)	(30W) (20W)	6	\$239⁹⁵
2/70G	(3W) (5W)	(30W) (20W)	6	259⁹⁵
2/70H*	(28W) (20W)	(200W) (125W)	40	719⁹⁵

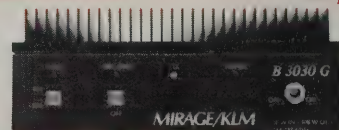
* Denotes No Receiver Preamplifier

New! Mini-AMPS

144 (2m)	(2W)	(30W)	6	\$ 99⁹⁵
144P (2m)	(2W)	(30W)	6	119⁹⁵
440 (440)	(3W)	(20W)	6	109⁹⁵
440P (440)	(3W)	(20W)	6	129⁹⁵

(P) Denotes with Preamplifier and Receive Filter

MIRAGE VHF/UHF Amps



SSB/FM/CW • Low Noise receive preamp

Model	MHz	input	out	amps	preamp	SALE
A-1015G	50-54	10W	150W	23	yes	\$349⁹⁵
A-1035G	50-54	10W	350W	23*	yes	589⁹⁵
B-23	144-148	2W	30W	5	no	119⁹⁵
B-23G	144-148	2W	30W	5	yes	154⁹⁵
B-215G	144-148	2W	150W	20	yes	339⁹⁵
B-108G	144-148	10W	80W	12	yes	204⁹⁵
B-1016G	144-148	10W	160W	25	yes	339⁹⁵
B-1030G	144-148	10W	300W	48	yes	619⁹⁵
B-1060G	144-148	10W	600W	52*	yes	989⁹⁵
B-2516G	144-148	30W	160W	25	yes	269⁹⁵
B-2530G	144-148	30W	300W	48	yes	619⁹⁵
B-2560G	144-148	25W	600W	52*	yes	989⁹⁵
B-5016G	144-148	50W	160W	24	yes	269⁹⁵
B-5030G	144-148	50W	300W	48	yes	599⁹⁵
B-5060G	144-148	50W	600W	45*	yes	989⁹⁵
C-22	222-225	2W	20W	5	no	\$119⁹⁵
C-22G	222-225	2W	20W	5	yes	154⁹⁵
C-211G	222-225	2W	110W	20	yes	299⁹⁵
C-106G	222-225	10W	60W	12	yes	214⁹⁵
C-1012G	222-225	10W	120W	5	yes	299⁹⁵
C-1022G	222-225	10W	220W	20*	yes	589⁹⁵
C-2512G	222-225	30W	120W	20	yes	289⁹⁵
C-2522G	222-225	30W	200W	42	yes	589⁹⁵
C-5012G	222-225	50W	120W	20	yes	299⁹⁵
C-5022G	222-225	50W	240W	42	yes	569⁹⁵
D-15N	425-450	2W	15W	3	no	\$169⁹⁵
D-26N	430-450	2W	60W	12	no	244⁹⁵
D-1010N	430-450	10W	100W	15	no	354⁹⁵
D-3010N	430-450	30W	100W	20	no	329⁹⁵
D-100-ATVN	430ATV	1W	52W	20	no	369⁹⁵
D-1010ATVN	430ATV	10W	100W	20	no	369⁹⁵

* at 28VDC N denotes Type-N connectors

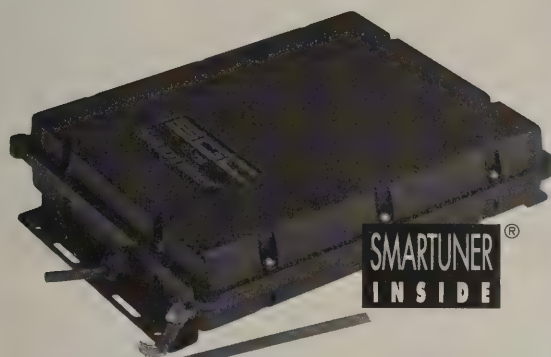
RC-1 Remote Control Head • for all Mirage amplifiers except the B-23S, B-23G, C-22G and D-26N. **\$45⁰⁰**

BUY SMART®

SG-230 Smartuner®

Antenna Coupler

SSB, AM, CW & DATA



You can't buy a smarter tuner than this. An automatic antenna coupler so intelligent it precisely tunes any length antenna -8 to 80 ft-in the HF band.

The Smartuner® automatically evaluates and switches 64 input and 32 output capacitance combinations, plus 256 inductance combinations in a "pi" network. The amazing result is over a half-million different ways to ensure a perfect match for your transceiver. And the most intelligent feature of all is that the Smartuner remembers the chosen frequency and tuning values, and will automatically reselect those values -in less than 10 ms, each time you transmit on that frequency.

The SG-230 Smartuner®. Buy smart.

- MICROPROCESSOR CONTROLLED • NON-VOLATILE MEMORY
- WATERPROOF B.I.T.E. INDICATOR • 1.8 TO 30 MHZ RANGE
 - 10 TO 150 WATTS INPUT POWER 10ms RETUNING TIME
 - 8 to 80 ft. ANTENNA (all types)

SGC

NO COMPROMISE
COMMUNICATIONS

1-800-259-7331

SGC Inc. SGC Building P.O. Box 3526 Bellevue, Washington 98009
Tel. (206) 746-6310 Fax: (206) 746-6384



BRAIN POWER

SG-500

**SMART
POWER
CUBE™**



Microprocessor Controlled Linear Amplifier. 1.8 - 30 MHz*

The SG-500 SmartPowerCube produces tremendous power-nearly as much as a 1 kW amplifier. Yet it requires less than one cubic foot of space.

Electronic brain power makes this possible. The SG-500 is an intelligent-microprocessor controlled-high powered linear amplifier, designed with high efficiency transistors. Its electronic brain constantly monitors your HF-SSB's activities, power needs and antenna condition, and automatically-in less than 15 milliseconds-selects the right broadband filter. And it's designed to reliably produce, essentially unattended, in the most demanding conditions. For maximum

power-intelligent
power-at low cost, the
SG-500 SmartPowerCube
is just the amplifier you
need. Call us for details.

Power Output:
SSB: 500 watts PEP
CW: 500 watts 10 Min. (no fan)
500 watts Unlimited with fan
AM: 250 watts Carrier max.

Band Switching: Fully Automatic
Protection: Input overdrive, Over current, Over temperature

*Export model: 1.8 - 30 MHz.,
U.S.: 1.8 - 24 MHz. Pending FCC approval.



SGC

NO COMPROMISE
COMMUNICATIONS

1-800-259-7331

The SGC Building P.O. Box 3526 Bellevue, Washington 98009 USA (206) 746-6310 Fax: (206) 746-6384

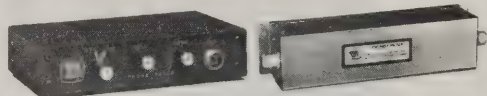
NYE VIKING



**3KW
Antenna
Tuner**

► **MB-V-A** Low-pass Pi-Net tuning, 1.8-30MHz continuous. Heavy duty silver plated continuously variable inductor with 25:1 vernier dial. 7KV variable capacitor and 15KV switch selected fixed output capacitors. Tunes antennas 1/4-wave length or longer from 40-2000Ω and provides harmonic suppression. Note: some antennas may not tune at 1.8 MHz. Automatic metering of SWR without reset or calibration. Separate RMS 300W/3KW wattmeter, automatically switched. Precision 2½" recessed and backlit meters display SWR and Power, continuously. Rugged, silver plated 5-position pushbutton antenna switch selects 4 antennas; 2 coaxial, single wire and balanced line, and tuner bypass. Trifilar-wound 3KW toroid balun provides balanced output from 200 to 1000Ω, and unbalanced output down to 20Ω. Requires 9V battery for meter and external 12VDC for meter lights. 14½" w x 6¾" h x 12¼" d, 18 lbs **\$729⁹⁵**

► **MB-V-B** same specifications as MB-V-A above, except no Power or SWR metering capability **\$599⁹⁵**



NYE Phone Patch (left) Interface your transceiver with a telephone line and run phone patches while retaining full mic. function. Automatic line level control for comfortable monitoring and NULL control for superb VOX operation. 1¾" h x 7¾" w x 4¾" d

► **047-002** has 8-pin microphone connector **\$159⁹⁵**

► **047-003** has 8-pin mic connector and speaker **169⁹⁵**

NYE Low Pass Filter (right) installs between transmitter output and antenna. Eliminates Television Interference caused by harmonics from transmitters operating in the 1.8-30MHz range falling in the TV bands. Rated at 2KW, handles 5KW SSB peaks. Flat, low loss passband and stopband for over 65dB attenuation above 57MHz. SO-239 connectors, both ends **020-001 \$49⁰⁰**

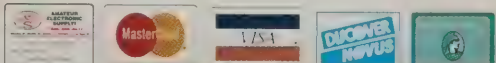
ASTATIC Microphones



► **D-104L (left)** The original "super talk power" microphone, a favorite of hams for decades! High output and 300-7500Hz response with rising characteristics between 500 and 4000 Hz, provides maximum intelligibility. Shock proof cartridge with high impedance crystal element, metal sealed for protection. Solid machined brass parts, heavy mesh grille, all heavy chrome plated. 3" dia. x 1¾" d, 14 oz. Requires T-UG9 stand **\$39⁹⁵**

► **10DA-L (center)** High impedance dynamic SSB microphone. Controlled 300-3000 Hz response provides high attenuation of the unwanted sideband and better copy through interference. 2¾" w x 2½" h x 3¾" d, 17 oz. Requires T-UG9 stand **\$49⁹⁵**

► **T-UG9 (right)** Accepts the D-104-L or 10DA-L microphone heads. Built-in adjustable preamplifier with an output impedance that matches most transmitters. Side switch bar for PTT with slide-up clamp for locking down. Height is 8½" without head, base is 5½" diameter. Chrome neck, grey base, 6-wire coiled cable. Requires 9V battery for the preamplifier **\$49⁹⁵**



JPS Communications, Inc

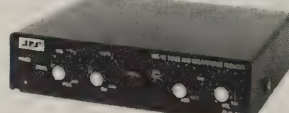
Solve your noise problems with Digital Signal Processing! ...



**Noise
& Interference
Reduction Unit**

► **NIR-10** Simply installs between the audio output and speaker of your communications receiver. Provides real-time 40MHz Digital Signal Processing to enhance the quality of received voice and CW signals. NIR Mode: reduces or eliminates heterodynes, ignition, power line and white noise, and RTTY interference. Peak function: reduces white noise interference. Notch Filter mode: easily removes multiple heterodynes. Band Pass mode: features an adjustable center frequency, selectable bandwidths, extremely steep skirts and greater than 60 dB ultimate rejection. Requires 12VDC @ 1 A. 2½" h x 7" w x 6" d, 2 lbs **\$299⁹⁵**

**Dual DSP
Noise
Reduction &
Filter Unit**



► **NIR-12** JPS's newest and most advanced noise reduction and filter unit. Dual DSPs provide simultaneous Bandpass Filter, Noise Reduction (2 types) and Multiple Tone Removal. Both Spectral Subtraction (NIR) and Dynamic Peaking noise reduction methods eliminate impulse noise as well as White Noise. An Automatic NIR mode sets the noise reduction at optimum based on the measured signal-to-noise ratio of the received signal. The Notch filter removes multiple heterodynes, including CW and RTTY tones, from desired voice signals. Super Selective linear phase FIR filters are continuously variable in both bandwidth and center frequency. Bandwidth is adjustable between 50 Hz and 3200 Hz. Internal access to the dual DSPs is provided via RS-232. Simply installs between receiver audio output and speaker. Requires 12 VDC @ 1A. 1¾" h x 6½" w x 7¾" d, 4 lbs **\$349⁹⁵**



**DSP Spectral
Notch Filter**

► **NF-60** Digital Signal Processing automatically and effectively removes MULTIPLE interfering heterodynes (tones and whistles), tune-ups and CW/RTTY tones. Simple connection between your receiver audio output and speaker. Built-in audio power amplifier. 12VDC @ 1A. 1¾" h x 6" w x 4¾" d, 2 lbs **\$149⁹⁵**



**Noise Reducer
and Filter Unit**

► **NRF-7** Provides several functions that improve reception for Amateurs and SWLs. Reduces or eliminates atmospheric (white/pink) noise and multiple heterodynes. No-delay filters for AMTOR, PACTOR and break-in CW. Sharp, non-ringing CW and voice filters, plus auto NOTCH filter and white noise reduction. Built-in audio power amplifier. Installs between receiver audio output and speaker. 12VDC. 1¾" h x 6½" w x 5" d, 2 lbs. **\$219⁹⁵**

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**Wide Band
Noise and Tone
Remover**

► **NTR-1** A general purpose audio processing unit for noise reduction and multiple tone removal for AM/FM, or other wide-band 160-6600Hz signals. Provides narrow band 100-3400Hz operation for SSB, CW or Data. Reduces atmospheric noise through dynamic peaking and rapidly removes multiple tones from voice signals. Installs at receiver audio output, has built-in audio power amplifier. 12VDC. 1¾" h x 6½" w x 5" d, 2 lbs. **\$169⁹⁵**



**DSP Filter for
Slow Scan TV**

Milwaukee only

► **SSTV-1** Improves Slow Scan Television (SSTV) reception. Two DSP filters reduce or eliminate adjacent channel and in-band interference which can cause "tears" and color shifts, really clear up noisy and distorted SSTV pictures. Sharp cutoff passband centered at the sync pulse frequency of 1200Hz, yet wide enough to pass VIS and other information. Linear phase, steep skirted 1500Hz-2300Hz passband for the picture data. Effectively removes any offending tones, interference, etc., below 1050Hz and above 2300Hz. 12VDC. 1¾" h x 6" w x 4¾" d, 2 lbs **\$160⁰⁰**



**Antenna Noise
Canceller**

► **ANC-4** This antenna noise canceller provides a means of eliminating local received noise before it enters the receiver. Unit installs between antenna and receiver input and includes two noise antennas: whip and wire. Two front panel adjustments, PHASE and GAIN, allow local noise levels to be virtually eliminated from your receiver and let your hear what's going on beneath all of those those noises. It is especially effective at cancelling local computer noise, electrical equipment noise and POWER LINE NOISE. Automatic BYPASS is provided when transmitting (up to 150W). Can also be used as an active antenna. requires 12 VDC @ 300ma. 1¾" h x 6" w x 4¾" d, 2 lbs **\$175⁰⁰**

► **Power Pack** 115VAC adapter for above JPS units **\$16⁰⁰**



**SHURE
Microphones**

► **444D (left)** A dual-impedance CONTROLLED MAGNETIC® fixed station microphone with a 200 to 6000Hz response, tailored for optimum speech intelligibility. Switch selectable for high (15kΩ-10MΩ) or low (200-1000Ω) impedance inputs, and for Normal or VOX operation. Momentary or locking push-to-talk switch bar, 2½" vertical height adjustment. Coiled three-conductor microphone cord, supplied with a wiring guide, requires proper connector. 2 lbs, 6 oz. **\$82⁹⁵**

► **526T Series II SUPER PUNCH® (center)** A dynamic microphone with a solid-state preamplifier and adjustable volume control. Works into 500 to 5000Ω inputs impedances allowing replacing ceramic or dynamic original equipment. Tailored 200 to 6000Hz frequency response. Momentary or locking push-to-talk bar. Coiled 5-conductor cord, wiring guide, requires a connector and 9V battery. 2 lbs, 11 oz **\$112⁹⁵**

► **404C (right)** A High-Z (15kΩ-100kΩ) hand held microphone with a high output level and 200-4000Hz response. Small, light and compact case fits naturally and comfortably in the palm of the hand. Requires connector. 17 oz **\$56⁹⁵**

- ▶ **MFJ-16010 Random Wire Tuner (top)** • Covers 1.8-30 MHz continuously, and handles 200W PEP. Lets you operate all bands anywhere, from apartment, motel, camping, etc. with any transceiver using a random length wire antenna. Ultra small - 2" w x 3" h x 4" d. **\$39⁹⁵**
- ▶ **MFJ-901B Versa Tuner** • Covers 1.8-30 MHz continuously, and handles 200W PEP. Matches coaxial cable, random length wires and balanced lines (built-in 4:1 balun). Very popular for use between a transceiver and a final amplifier for proper matching and full drive, or as a mobile antenna tuner. The smallest Versa Tuner, 5" w x 2" h x 6" d. **\$59⁹⁵**
- ▶ **MFJ-945D Mobile Tuner** • Covers 1.8-30 MHz and handles 300W PEP. Extends mobile antenna bandwidth and eliminates having to frequently stop, get out, and adjust your whip when making frequency changes. Matches coax cable only, has built-in cross-needle SWR bridge and wattmeter with 50/300 and 5/30W ranges. 8" w x 2" h x 6" d. **\$84⁹⁵**
- ▶ **MFJ-941E Versa Tuner II** • Covers 1.8-30 MHz and handles 300W PEP. Matches everything! - coax fed dipoles, vees, whips, verticals, beams, random wires and balanced lines (built-in 4:1 balun). Built-in lighted Cross-Needle SWR/Power meter with 300/50W and 30/5W ranges. Eight position antenna switch to select two coax lines (direct or thru tuner), random wire/balanced line, or external dummy load. 10" w x 2" h x 7" d. **\$99⁹⁵**
- ▶ **MFJ-948 Deluxe Tuner** • Covers 1.8-30 MHz and handles 300W PEP. Has all features of MFJ-941E, plus it has a larger lighted peak reading Cross-Needle SWR/Power meter with 300/50W & 30/5W ranges, and lamp switch. **\$119⁹⁵**
- ▶ **MFJ-949E Deluxe Versa Tuner II** • Has the same power, tuning, and switching capability as MFJ-941E described above. In addition, it has a lighted peak reading Cross-Needle SWR/Wattmeter, and a built-in 300W 50 Ω dummy load. 10" w x 2" h x 7" d. **\$129⁹⁵**
- ▶ **MFJ-962C Versa Tuner III** • Covers 1.8-30 MHz and handles 1.5KW PEP. Matches coax, random wire or balanced line (built-in heavy-duty 4:1 balun). Lighted peak and average reading Cross-Needle SWR/Wattmeter with 200/2000W ranges. Six position switch for 2 coax lines (direct or thru tuner), random wire and balanced lines. 10" w x 4" h x 15" d. **\$209⁹⁵**
- ▶ **MFJ-986 Differential-T Tuner™** • Covers 1.8-30 MHz, handles 3KW PEP, tunes most antennas. Features a broadband T-network with roller inductor and differential capacitor. Lighted peak and average reading Cross-Needle SWR/Wattmeter with 200/50W and 2000/500W ranges. Roller inductor spinner knob with 3-digit turns counter, 6-position antenna switch and external dummy load switches, 4:1 balun. 10" w x 4" h x 15" d. **\$259⁹⁵**
- ▶ **MFJ-989C Versa Tuner V • Heavy-Duty!** Covers 1.8-30 MHz, handles 3KW PEP, matches everything! - coax fed antennas, random length wires, and balanced lines. Features a roller inductor with spinner knob and 3-digit turns counter. Lighted peak and average reading Cross-Needle SWR/Wattmeter with 200/2000W ranges, 50 Ω - 300 watt dummy load, 4:1 balun, 6 position antenna switch, and tilt bail. 10" w x 4" h x 15" d. **\$299⁹⁵**

▶ **MFJ-921 (VHF) / MFJ-924 (UHF) Tuners** For base or mobile operation, they match a wide range of impedances. The MFJ-921 covers 2 meters and 220MHz, the MFJ-924 covers 440MHz only. Both are rated at 300W PEP and feature a built-in SWR/Wattmeter. 8" w x 2" h x 3" **\$69⁹⁵**

▶ **MFJ-931 Artificial Ground** Eliminates problems caused by an inadequate ground. Resonates a random length wire to act as a tuned counterpoise. Improves efficiency and pattern. Covers 1.8-30MHz, RF ammeter aids tuning. 7 1/2" w x 3 3/4" h x 7" d. Not for coaxial fed antennas. **\$74⁹⁵**

▶ **MFJ-1701 Antenna Switch** 6 positions, 50-75 Ω . Rated for 2KW PEP or 1KW CW, 1.8-30MHz. SO-239 connectors. Unused positions are grounded for lightning protection. 10" w x 3" h x 1 1/2" d. **\$34⁹⁵**

▶ **1700B Antenna/Transceiver Switch** Select from 1-6 antennas and 1-6 rigs in any combination. Tuner, SWR meter, linear, etc. can be left in line to operate with any combo. 50-75 Ω . Handles 2KW PEP or 1KW CW, 1.8-30MHz. SO-239 connectors. Unused positions ground for protection. 10" w x 3" h x 1 1/2" d. **\$64⁹⁵**

▶ **MFJ-1702B Antenna Switch** 2 positions plus center ground, 50 Ω . Rated to 500MHz with <0.2dB loss, 2.5KW PEP or 1KW CW. >60dB isolation @ 300 MHz/>50 dB @ 450 MHz. Unused terminal grounds for lightning protection **\$21⁹⁵**

▶ **MFJ-1702BN** Low loss on UHF, with Type N connectors, good up to 1.1 GHz. **\$31⁹⁵**

▶ **MFJ-850 Line Voltage Monitor** Plug into any AC outlet and monitor line voltage on an expanded 95-135V scale **\$19⁹⁵**

▶ **MFJ-1704 Antenna Switch** 4 positions, plus center ground. 50 Ω -rated to 500MHz with <0.2dB loss. Handles 2.5KW PEP, 1KW CW, >50dB isolation @ 500MHz. Includes a replaceable lightning protection device that reduces lightning induced surges/static. **\$59⁹⁵**

▶ **MFJ-1704N** with Type N connectors **\$69⁹⁵**

▶ **MFJ-250 Versaload** A 50 Ω oil-filled dummy load. Provides low VSWR to 400 MHz. Rated 1 KW CW or 2KW PEP for 10-minutes, with 1/2 rating for 20-minutes; 200W CW, 400W PEP continuous. 7 1/2" h x 6" diameter. Includes oil. **\$49⁹⁵**

▶ **MFJ-250X** same, without oil **\$29⁹⁵**

▶ **DRY DUMMY LOADS** An air cooled, non-inductive 50 Ω resistor in a perforated metal housing. Handles full rated load for 30-seconds, with a de-rating curve up to 5-minutes.

▶ **MFJ-260B (HF/VHF)** 300W, 1-150MHz, 2 1/2" w x 2 1/2" h x 7" d **\$29⁹⁵**

▶ **MFJ-264 (UHF)** Up to 650MHz, usable to 750MHz. Rated at 1.5KW for 10-seconds, 100W for 10-minutes. 3" w x 3" h x 7" d. **\$59⁹⁵**

▶ **MFJ-704 Low Pass Filter** Reduces TVI caused by harmonics generated by 1.8-30MHz transmitters falling in the TV bands. 52 Ω , low insertion loss and high harmonic attenuation. Legal power, SO-239 connectors. 3" w x 3" h x 9" d. **\$39⁹⁵**

▶ **MFJ-1118 High Current Outlet** Connects to 12VDC source and provides two pair of high current (total 30A) for HF or VHF rigs, and six pair of binding posts for other 12V station accessories. Has built-in voltmeter, switch and fuses. **\$64⁹⁵**

▶ **MFJ-1116 DC Power Outlet** Connects to 12VDC source and provides 8 HD-5 5-way binding posts for powering multiple items. Built-in voltmeter, switch and fuse. RF bypassed, outlets spaced for banana jacks 1 3/8" w x 2 1/4" h x 2 1/4" d. **\$44⁹⁵**

▶ **MFJ-1112** as above, 5 posts, no meter or switch **\$29⁹⁵**

▶ **MFJ-249 SWR Analyzer™** Covers 1.8-170MHz. Has built-in 10 digit LCD frequency counter and vernier tuning. Automatic! - connect antenna, set analyzer to frequency and read SWR directly. Monitor SWR changes as you make adjustments. Separate BNC input for use as a frequency counter. 1 ppm 10MHz crystal time base; .01, .1, 1 and 10 sec. gate times. Uses 6 AA cells or 110V AC with MFJ-1312B adapter. 4" w x 2 1/2" x 6 3/4" **\$179⁹⁵**

▶ **MFJ-259 HF/VHF SWR Analyzer with RF Resistance Meter** Has all or the features of the MFJ-249, but also allows measurement of RF feedpoint resistance up to 500 Ω at minimum SWR. Take the guesswork out of building matching networks and baluns, you can watch the effects of spacing on radiation resistance as you adjust your antenna. **\$199⁹⁵**

▶ **MFJ-29** Carrying pouch for 249/259 **\$19⁹⁵**

▶ **MFJ-66** Dip meter adapter for MFJ-249/259, Two coils for coverage of 1.8-30MHz and 30-170 MHz. **\$19⁹⁵**

▶ **MFJ-812B VHF 2 meter/220MHz SWR/Wattmeter** Forward and reflected power (3/300W), and SWR. Reads SWR from 14-220MHz, and FS. 4 1/2" w x 2 1/4" h x 3" d. **\$29⁹⁵**

▶ **MFJ-815B SWR/Wattmeter (left)** Covers 1.8-30MHz. Lighted Cross-Needle meter simultaneously monitors peak or average, forward and reflected power and SWR at a glance, without adjustments. Two ranges: 200W/2000W forward, and 50/500W reflected. 7 1/4" w x 4 1/2" h x 3 1/2" d. Meter light requires 12VDC **\$69⁹⁵**

▶ **MFJ-817** Same as MFJ-815B but covers 144 and 440MHz. Power ranges are 200/20W forward, and 50/5W reflected. **\$74⁹⁵**

▶ **MFJ-864 HF/VHF/UHF SWR/Wattmeter (right)** Covers 1.8 to 60, 144 and 440MHz. Separate directional couplers and connectors for each band. Reads forward and reflected power simultaneously on cross-needle meter with 30/300W ranges. **\$59⁹⁵**

▶ **MFJ-862 VHF/UHF SWR/Wattmeter** Same as MFJ-864 but covers 144, 220 and 440MHz bands. **\$39⁹⁵**

▶ **MFJ-860 HF SWR/Wattmeter** Same as MFJ-864 but covers 1.8 to 60 MHz. **\$39⁹⁵**

MFJ CW Transceivers

Single band, CW only, 5 models. Compact portable, up to 5 watts output. **Features incl.** superhet receiver, speaker, vernier tuning, 8-pole crystal filter, RT, AGC, semi/full break-in, sidetone. 12-15 VDC. 6" x 6 1/2" x 2 1/2". All. **\$154⁹⁵**, except **9017** ... **\$149⁹⁵**

Models and Coverage

▶ **9015** (15M) 21-21.2 MHz ▶ **9030** (30M) 10.1-10.15MHz

▶ **9017** (17M) 18.068-18.110MHz ▶ **9040** (40M) 7-7.15MHz

▶ **9020** (20M) 14-14.075MHz

▶ **MFJ-9420X 20-meter SSB Travel Radio** Features 12W output, a hot receiver and potent speech processor. Smooth reduction-drive VFO tuning, S-meter. 12VDC. 2 1/2" x 6 1/2" x 6" **\$209⁹⁵**

▶ **MFJ-1786 Hi-Q Loop Antenna** Covers 10-30MHz, continuous. Tunable from controller that features an SWR/Wattmeter and auto band selection. Only 36" diameter, installs almost anywhere! Uses 50 Ω coax, no separate control cable needed. **\$269⁹⁵**

MFJ-949E *Deluxe* 300 Watt Tuner

*More hams use MFJ-949's than any other tuner in the world!
Why settle for an imitation when you can have the real thing?*

In Stock at AES stores

AES's PRICE

MFJ-949E

\$129⁹⁵

*Includes FREE AC adapter
for meter light*



*More hams use MFJ-949's than any
other antenna tuner in the world!*

Why? Because the world's leading tuner has *earned* a worldwide reputation for being able to match just about anything.

MFJ-949's have been highly refined and have years of *proven* reliability.

Every MFJ-949E comes with... MFJ's famous one year *No Matter What™* unconditional guarantee... first-rate performance... unbeatable quality... the best tuner value in ham radio -- *all from the world's most trusted name in antenna tuners.*

Now the latest MFJ-949E gives you even more features and more value than ever at a new lower price.

Why take chances with an imitation when you can have the *real thing* from the world's most trusted name in antenna tuners.

More reasons why more hams use MFJ-949's than any other antenna tuner in the world...

Full 1.8-30 MHz Operation

1000 volt tuning capacitors, extra heavy duty inductor switch, Teflon® insulating washers and proper L/C ratio gives you arc-free no worries operation with up to 300 watts from 1.8 to 30 MHz.

Lighted Cross-Needle Meter

MFJ's lighted Cross-Needle Meter shows you SWR, forward and reflected power *simultaneously*. It reads both *peak* and average power on 300 or 30 watt ranges.

The meter is illuminated for easy reading in dim light and has an ON/OFF lamp switch. The meter lamp uses 12 VDC or 110 VAC. A *free* AC adapter is included at no extra cost.

Tunes any Antenna

The MFJ-949E tunes out SWR on dipoles, verticals, inverted vees, random wires, beams, mobile whips, shortwave receiving antennas... nearly anything!

Use coax feed, random wire or balanced lines. Has oversized *heavy duty* 4:1 balun.

Super Antenna Switch

MFJ's 8 position *super* antenna switch lets you select two coax fed antennas, random wire/balanced line or built-in dummy load for use through your MFJ-949E or direct to your transceiver.

MFJ's Cross-Needle SWR/Wattmeter is always active for monitoring forward and reflected power and SWR.

QRM-Free PreTune™

*Why take chances?
Why take chances with an imitation
when you can have the real thing from
the most trusted name in antenna tuners?*

MFJ's *QRM-Free PreTune™* lets you pre-tune your MFJ-949E off-the-air into a built-in dummy load without causing QRM.

Pre-tuning into a dummy load makes tuning your actual antenna faster and easier.

Full Size Dummy Load

The MFJ-949E has a *full size* non-inductive 50 ohm dummy load measuring 3/4 inch diameter by 5 inches. It *easily* handles 300 watts of abusive tune-up power.

You'll find it handy for tuning, testing and repairing your rig, setting power level, adjusting your mic gain and more.

Watchout for cheap midjet size dummy loads that change resistance as it heats up -- marginal ones could burn up your transceiver.

Custom Inductor Switch

The inductor switch is the most likely component to burn up in *any* antenna tuner.

The inductor switch in the MFJ-949E was *custom* designed to withstand the extremely high RF voltages and currents that are developed in your tuner -- it's not a flimsy *plastic* switch made for small signals and wired with *tiny* gauge wire.

Superior Cabinet

Each MFJ-949E cabinet is chemically treated and has a new tough scratch-proof vinyl cladding -- not paint that can scratch or chip off. You won't find a tougher,

longer lasting finish anywhere.

Detailed logging scales and legends are *permanently* silk screened on a *real* aluminum front panel and back panel -- it's not merely a plastic decal or glued-on paper strip that can peel off.

Superior Materials... Superior Construction

Every MFJ-949E uses Teflon® insulating washers, countersunk screws for meter bracket, wing-nut for ground post, fire-retardant epoxy glass PC board (*not* canvas based), heavy .063 inch thick aluminum chassis (*not* flimsy .050 inch), heavy gauge wire used throughout (*not* small gauge), custom cabinet (*not* multi-purpose with unused holes and internal protruding screws).

No Matter What™ Guarantee

Every MFJ-949E is backed by MFJ's famous one year *No Matter What™* unconditional guarantee. That means we will repair or replace your MFJ-949E (at our option) *no matter what* for a full year.

Others may give you a *limited* warranty on defects in material and workmanship.

But what do you do if it burns up and they say, "Sorry, your *limited* warranty does not cover that?"

Continuing Service

Only MFJ gives you a *direct* toll-free technical help line answered by *electronic technicians* who are experts in antenna tuners. We're here to help keep your MFJ product performing flawlessly -- no matter how long you own it -- just call toll-free 800-647-TECH(8324).

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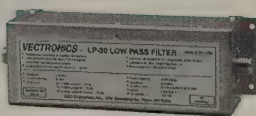
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MFJ... making quality affordable

VECTRONICS Ham Accessories

TVI FILTERS

► **LP-30 TVI Filter** Suppress television interference at the source, from HF transmitters operating below 30MHz. Use between transmitter and antenna or tuner to provide up to -70dB attenuation of harmonics that could fall in the TV bands. For 52Ω, up to 30MHz, rated 1500W continuous **\$59⁹⁵**



► **LP-2500** Rated for 2500W continuous RF power. **\$119⁹⁵**

► **HPF-1 High Pass Filter** Installs between transmitter and antenna or tuner to reduce harmonic television interference (TVI) radiated by

transmitters operating below 30MHz. Low receive loss in the TV passband (52 to 550MHz), unique shield-breaking circuit configuration prevents antenna cable from acting like an HF antenna. For 300Ω unbalanced system, and supplied with baluns with Type F connectors for 75Ω **\$17⁹⁵**

DUMMY LOADS

► **DL-300M Dry Dummy load** Simulates an accurate 50Ω antenna up to 150 MHz enabling you to test your transmitter without radiating a signal on the air. Power handling curve rated at 300W for 15-seconds, down to 100W for 40 seconds. VSWR <1.3:1 at 150MHz. 5" h x 2" d x 2 1/2" h, 8 oz. **\$39⁹⁵**

► **DL-650M Dry Dummy load** Good up to 650MHz. Power handling curve rated at 1500W for 10-seconds, down to 100W for 10-minutes. VSWR <1.3:1 at 500MHz **\$64⁹⁵**

► **DL-2500 High Power Dry Dummy load** A fan cooled heavy-duty load for up to 150MHz. Power handling curve rated at 2500W for 1-minute, down to 500W for 10 minutes **\$169⁹⁵**



Two models provide loads of fun on 10 meters operating Base or Mobile for local communications as well as occasional worldwide DX. Participate in Club Events, Nets, Repeaters & Emergency Communications.

✓ **BAND:** 10 meters only; 28.0 to 29.7 MHz

✓ **MODES:** FM • SSB • CW • AM

✓ **POWER:** **RCI-2950** 25W SSB, 8W AM/FM/CW
RCI-2970 100W SSB, 50W AM/FM/CW

FEATURES: • Full band coverage • Built-in dual VFO • Ten most used frequencies can be pre-programmed for easy access • Receiver incremental tuning • Repeater offset switch • Squelch • Noise blanker • Large back-lit LCD display indicates transmit power, receive signal strength, modulation, SWR calibration and SWR • RF power output selector • PA mode • External spkr connection • 13.8VDC

RCI-2950 2 1/2" h x 7 1/2" w x 10 1/2" d, 4 1/2 lbs, 5 amps **\$259⁹⁵**
RCI-2970 3 1/2" h x 7 1/2" w x 10 1/2" d, 7 1/2 lbs, 18 amps **\$369⁹⁵**

ANTENNA TUNERS

► **VC-300M Mobile Antenna Tuner** Compact, lightweight and economical for base or mobile. Compatible with almost any antenna, including vertical, dipoles, inverted Vees, beams and mobile whips that are fed by coaxial cable, and open feeders, balanced lines, or single wires. Designed to provide matching from 1.8 to 30 MHz, and up to 300W continuous RF power capability. Dual-movement cross-needle meter simultaneously monitors RF power and SWR. Compact - 7 1/4" w x 3 1/2" h x 8 3/4" d, 2 1/2 lbs **\$119⁹⁵**



► **VC-300DLP Antenna Tuner** A good quality, economical antenna tuner designed to provide matching from 1.8 to 30 MHz, and up to 300W continuous RF power capability from 3.5 to 30MHz (150W on 1.8MHz). Built-in dummy load, a dual-movement cross-needle peak or average reading meter, and a meter light. Compatible with almost any antenna including verticals, dipoles inverted Vees, beams and mobile whips that are fed by coaxial cable, and balanced lines or single wire; a 4:1 balun and six position antenna selector switch are built-in. 10 1/4" w x 9 1/2" d x 3 1/2" h, 3 1/2 lbs. **\$144⁹⁵**

► **VC-300D Antenna Tuner** identical function and specifications as the VC-300-DLP above, but has the additional capability to show a peak power indication by using an instantaneous responding digital bargraph display. A LEVEL and DELAY control has been added to calibrate the display to the meter, and to vary the delay response **\$186⁹⁵**

► **HFT-1500 Antenna Tuner** Rated 1500W (3KW PEP) 1.8 to 30MHz, 1000W (2KW PEP) on 160 and 10 meters. Features a cranked continuous roller inductor with a turns counter, and vernier tuning on both the antenna and input capacitors. A dual-movement cross-needle meter shows average forward and reverse power, and SWR; a 21-segment digital bargraph indicates peak power. For accuracy, a true RF directional coupler sensor is used for the internal wattmeter function. Includes a built-in 4:1 balun for balanced antenna feedline and six-position antenna selector switch. 5 1/2" h x 12 1/2" w x 12" d, 10 lbs **\$389⁹⁵**



► **R-10 FM Communications Interceptor** Receives FM signals from 30MHz to over 2GHz, without gaps. Unlike scanners that must be tuned or scanned through a fixed frequency range, the interceptor receives through the range without tuning, and provides a new dimension to recreational monitoring. Take it with you on cruise ships, to military bases, theme parks, the zoo, airports, to space shuttle launches, sporting events, car races and anywhere else two-way FM communication is used. The Interceptor is completely automatic for hands free operation. The actual distance from which the Interceptor can detect a transmission will vary depending upon the RF Floor and the presence of other strong signals, distances of 200 to 400 feet from a 5W UHF or VHF transmitter are typical **\$359⁰⁰**

► **Scout/400 Frequency Scout** Automatically finds and records frequencies in the 10MHz to 2.8GHz frequency range, from 15 to 400 ft. away depending upon conditions. 9-digit display, 16-segment signal level bargraph. Differentiates between random noise and coherent RF transmissions. Ideal for surveillance walk-by situations; has a built-in vibrator to secretly let you know that you've found an active frequency. For drive by applications, a double beep indicates a new frequency; a single beep indicates that an already recorded frequency has been hit again. Up to 250 hits can be counted for each of 50 frequency memories. Internal battery gives more than 6 hours of operating time, a charger for one-hour rapid-charge is included. 3 1/2" h x 2 1/2" w x 1 1/4" d, 8 1/2 oz. **\$399⁰⁰**



► **COMET WS-1M Window Mounting Bracket** Perfect for using on vans and mini-trucks with pop-out windows, rental cars, etc. A multi-adjustable mounting bracket includes 11 1/2 ft. of high quality coaxial cable with gold-plated UHF connectors attached. Suction cups on the inside as well as outside of the bracket, along with heavy-duty construction allows for mounting gain-type antennas such as the COMET B-20 or COMET SB-5 dualbander models, and others **\$54⁹⁵**

► **COMET HA-4S HF Mobile Antenna** Switch between four HF bands without getting out to changing coils or plugs. Standard coils include 40, 15, 12, 10M; opt. 20M coil available. Compact and lightweight, only 1 lb, 14 oz, and just 4 ft. 10 in tall which allows for more convenient HF mounting options than conventional HF mobile antennas. May be mounted on a trunk-lip style bracket such as the COMET RS-820 (shown), or a rain gutter mount such as the RS-80. High quality construction includes a gold-plated PL-259 at the base, and a threaded collar that unscrews to expose a hinged base, allowing a 90-degree fold-over for entering garages, parking structures, etc. **\$169⁹⁵**



► **Power Pocket** Portable or extra power for Emergencies, Hamfests, Hiking, etc. A 12V/2A/H sealed lead-acid rechargeable battery provides hours of extended talk time, up to 6 times longer than standard battery packs, and can be recharged to 100% anytime without the memory effect. Compact carrying case with belt loop and shoulder strap, and the entire pack weighs only 30 oz. Simply plug your radio into the included female adapter socket. Complete recharge in 6 to 8 hours, with the supplied 110VAC to 12V charger. Only, 3 1/2" w x 1" d x 6 1/2" h, 30 oz. **\$66⁹⁵**

NCG

► **Light-weight boom microphone and earpiece with a dual action PTT/STL.** Press the button for pus-to-talk, or slide the button for slide-to-lock convenience. A good alternative to cumbersome headset boom microphones. Good transmit and receive audio.



► **MH-900P** Icom, Standard Yaesu and Alinco version **\$39⁹⁵**
► **MH-900PK** Kenwood version **\$39⁹⁵**



► **NCG Light-weight boom microphone/headset for handheld radios.** Conveniently folds-up for easy storage. Boom microphone pivots to allow left or right ear speaker position. PTT switch, 36 in. cord.

► **MP-28** Icom, Standard Yaesu and Alinco version **\$39⁹⁵**
► **MP-28K** Kenwood version **\$39⁹⁵**

RF Limited

HL-35V Power Plus Amplifier

- Frequency: 144-148MHz
- RF Input: 0.5-5W
- RX Pre-amplifier: Low noise GaAs FET with 13dB gain
- Connectors: UHF, SO-239
- Dimensions: 1 1/2" h x 4" w x 6 1/2" d, 1.25 lbs.
- DC Power: 13.8VDC at 4.5 amps max.



\$99⁹⁵

SWR & Power Meters...



BIRD
Electronic Corporation

Carrying case, dummy load, elements and connectors are optional.

Case will hold three additional elements (6) instead of dummy load as shown.

► **BIRD 43 THRULINE® Wattmeter** Measures incident and reflected power in 50Ω coaxial transmission lines with 5% of full scale accuracy; insertion VSWR is less than 1.05. Comprised of a line section, and a direct-reading meter with expanded scales in 25, 50 and 100 units. Rugged aluminum case. Supplied with UHF female (SO-239) Quick Change (QC) type connectors; optional UHF, N and BNC types available. Optional plug-in elements (see table below) provide a wide choice of frequency ranges from 2-1000MHz, with power levels up to 5000W (2-30MHz) and up to 1000W (30-1000MHz). Select one or more elements now, add others as needed. 6 1/2" h x 5 1/2" w x 3 3/4" d, 3 lbs. **\$239⁰⁰**

► **43P Peak Reading Wattmeter Meter** Same versatile functions as the BIRD 43, but includes switch selectable Peak Reading (PEP) capability. Uses the same plug-in elements, QC connectors and accessories. Requires two 9V batteries **\$359⁰⁰**

► **4431 THRULINE® Wattmeter** Same as the 43, but with a built-in variable RF signal sampler to provide an adjustable low level signal sample for counters, scopes, analyzers, etc. **\$421⁰⁰**

TABLE 1 Standard BIRD Elements
Frequency Bands (MHz)

Power Range	2-30	25-60	50-125	100-250	200-500	400-1000
5 watts	—	5A	5B	5C	5D	5E
10 watts	—	10A	10B	10C	10D	10E
25 watts	—	25A	25B	25C	25D	25E
50 watts	50H	50A	50B	50C	50D	50E
100 watts	100H	100A	100B	100C	100D	100E
250 watts	250H	250A	250B	250C	250D	250E
500 watts	500H	500A	500B	500C	500D	500E
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E
2500 watts	2500H					
5000 watts	5000H					

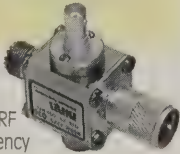
TABLE 2 Low-Power BIRD Elements

1 watt	Cat. No.	2.5 watts	Cat. No.
25-30 MHz	025-1	25-30 MHz	025-2
30-35 MHz	030-1	30-40 MHz	030-2
35-40 MHz	035-1	40-50 MHz	040-2
40-50 MHz	040-1	50-60 MHz	050-2
50-60 MHz	050-1	60-80 MHz	060-2
60-80 MHz	060-1	80-95 MHz	080-2
80-95 MHz	080-1	95-150 MHz	095-2
95-125 MHz	095-1	150-250 MHz	150-2
110-160 MHz	110-1	200-300 MHz	200-2
150-250 MHz	150-1	250-450 MHz	250-2
200-300 MHz	200-1	400-850 MHz	400-2
275-450 MHz	275-1	800-1000 MHz	801-2
425-850 MHz	425-1		
800-1000 MHz	801-1		

BIRD Variable RF Signal Samplers

Stand alone wide-range, THRULINE® RF coupling probes for spectrum analysis, RF signal observation on a scope, or frequency counting and control.

See Price List for BIRD accessory pricing ...



► **YAESU YS-60 SWR/Power Meter** Monitors average (CW) and peak (SSB) transmitter output, and VSWR of antenna system. Covers 1.6-60MHz up to 2KW with meter ranges of 20/200/2000W. 50Ω, SO-239 connectors. Requires

external 12V DC for meter lamps and internal op amplifier circuits. 4 3/4" w x 2 1/2" h x 3 3/4" d, 1 1/2 lbs. **\$129⁹⁵**

► **YAESU YS-500 SWR/Power Meter** Similar to YS-60 above, but covers 140-525MHz, and up to 200W with meter ranges of 4/20/200W. 12V not required **\$109⁹⁵**



► **COMET** Three models with separate meter and RF sensor with 6 ft. long cable. Lighted, cross-needle meter with three selectable power ranges, shows forward and reflected power, and SWR simultaneously, plus indicates DC voltage from power source. 50Ω, 12VDC. 4 3/4" w x 3 3/4" h x 1 1/4" d, 1 lb, 4 oz.

► **CMX-1** 1.8-60MHz; 30, 300, 2000W ranges **\$189⁹⁵**
 ► **CMX-2** 1.8-200MHz; 20, 50, 200W ranges **179⁹⁵**
 ► **CMX-3** 140-525MHz; 20, 50, 200W ranges **169⁹⁵**



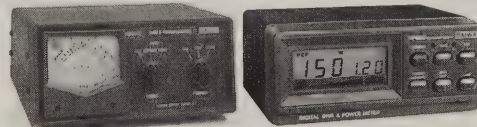
► **DIAMOND Meters** Five models, all measure Power and SWR with 5-10% of full scale accuracy. Illuminated meter, sensor switch and LED indicator. Power ratings listed below are for intermittent operation. For continuous mode (CW, FM, etc.), ratings vary with frequency. All have SO-239 connectors, except the SX-1000 which has a Type-N. The SX-600 and SX-1000 are dual band. 12VDC required for displays. 6 1/2" w x 2 1/2" h x 4" d, 2 lbs.

► **SX-100** 1.6-60MHz, 30/300/3000W ranges **\$157⁹⁵**
 ► **SX-200** 1.8-200MHz, 5/20/200 ranges **126⁹⁵**
 ► **SX-400** 140-525MHz, 5/20/200W ranges **147⁹⁵**
 ► **SX-600** 1.8-160MHz and 140-525MHz, 5/20/200W **239⁹⁵**
 ► **SX-1000** 1.8-160MHz and 430-1300MHz, 5/20/200W **269⁹⁵**



► **DAIWA CN-101 SWR/Power Meter** Covers 1.8-150MHz, rated at 1500W from 1.8-60MHz and 1000W at 144MHz with 15/150/1500W RMS or PEP power ranges. Cross-needle meter shows forward/reverse power, and SWR simultaneously; ±10% fs accuracy. SO-239 connectors. 6 1/2" w x 3 1/2" h x 3 3/4" d, 1 1/2 lbs. **\$89⁹⁵**

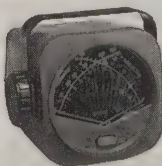
► **DAIWA CN-103M** Same as CN-101, except 140-525MHz, rated at 200W with 20/200W meter ranges **\$94⁹⁵**



► **DAIWA NS-660PA SWR Meter** (left) Covers 1.8-150MHz, with 30/300/3000W ranges. Cross-needle meter shows RMS or PEP forward and reverse power, and SWR simultaneously. 50Ω, SO-239 connectors. 7 1/4" w x 3 3/4" h x 5 1/4" d, 2 1/2 lbs. **\$199⁹⁵**

► **DAIWA DP-830 Digital SWR Meter** (right) Covers 1.8-150 and 149-525MHz. Fully automatic! Large LCD displays forward RMS or PEP power, and SWR by digits and bargraph, simultaneously. Power ranges: 1.5KW (1.8-150MHz) and 150W (140-525MHz). SWR beep tones, clock function displays four different times. 50Ω, SO-239 connectors. 5 1/2" w x 2 1/2" h x 4 1/4" d, 2 1/2 lbs. **\$319⁹⁵**

► **DAIWA DP-820 Digital SWR Meter** Same as DP-830, except covers 140-525MHz, 150W and no clock function. **\$249⁹⁵**



► **DAIWA CN-410M Compact SWR and Power Meter** For mobile or base use. Covers 3.5-30MHz, rated at 150W with 15/150W forward and 50W/5W reflected power ranges. Backlighted, cross-needle meter shows forward/reverse power and SWR simultaneously. 50Ω input with SO-239

connectors, mt. bracket. 2 1/4" w x 3 1/4" d x 3 3/4" d, 10 oz. **\$89⁹⁵**

► **CN-460M** Same features and rating as CN-410M, except covers the 140-450MHz range. **\$89⁹⁵**
 ► **CN-465M** Same features and rating as CN-410M/460M, except covers 140-450MHz, 75W with 15/75W forward and 5/25W reflected ranges. **\$89⁹⁵**

Order Toll Free - Use your Credit Card!



► **RF APPLICATIONS P-3000 HF Power/VSWR Indicator** microprocessor based instrument that gives fast, accurate Power/VSWR readings in real time from 1.8 to 30MHz, without adjustments or calibration. During high VSWR conditions, a relay can interrupt the control circuit between rig and amplifier to prevent high power from going to your antenna. Multi-functional LED displays provide the function of three instruments

► **Peak Digital Power Display** • Range is 10 to 2950 watts with four selectable parameters: Forward Power; Reflected Power; True Power and Forward Volts.

► **VSWR Display with Alarms** • Indicates VSWR from 1 to 19:1 with no calibration required. When VSWR exceeds 3:1 an alarm LED signals on the display unit and the protection relay de-energizes to disable the amplifier control circuit (if desired).

► **Instantaneous Power Bargraph** • Auto-ranging. Ten LEDs indicate 10% to 100% in 120, 100 and 2000W ranges. 100 millisecond response time makes tuning and SSB/CW monitoring easy.

A separate remote Directional Coupler rated at 1,500W continuous can be located up to 6 ft. away from the display unit. SO-239 connectors (50Ω), requires 12 VDC @ 250mA. Display: 6 1/2" w x 5 1/4" h x 2 1/4" d; Coupler: 4 1/2" w x 3 3/4" h x 2 1/4" d. 6 lbs total. **\$299⁹⁵**

P-3000-P 110 VAC to 12VDC adapter **12⁹⁵**



► **KENWOOD SW-2100 SWR/Power Meter** Covers 1.8 to 30MHz dual meters simultaneously display RF power up to 2000W, and VSWR. Ranges: 0-200W and 0-2000W, 10% of full scale reading accuracy. Requires 30W RF for SWR measurement. 52Ω, SO-239 connectors. 8 1/2" w x 2 1/2" h x 3 3/4" d, 1.9 lbs **\$149⁹⁵**



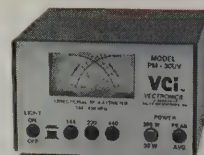
► **MIRAGE Meters** Four models - all measure RMS and peak forward and reverse power, and SWR directly. High quality meter, remote coupler mount mounting. 50Ω coaxial, SO-239 input and output connectors, negligible insertion loss. 5 1/2" h x 4 1/2" w x 5 1/4" d, 3 1/2 lbs. Requires 9V battery, 9-13.6V DC, or AC adapter. Low battery indicator.

► **MP-1** 1.8 - 30 MHz; 25, 200, 2000W ranges **\$209⁹⁵**
 ► **MP-2** 50 - 200MHz; 50, 500, 1500W ranges **209⁹⁵**
 ► **MP-3** 425 - 450MHz; 5, 50, 500W ranges **239⁹⁵**
 ► **MP-4** 1260 - 1300MHz; 1, 10, 100W ranges **259⁹⁵**

► VECTRONICS PM-30HF

SWR/Power Meter Looks similar to the model shown. Measures and displays RMS or PEP forward and reflected power, and SWR simultaneously on an illuminated cross-needle meter. 1.8 - 60MHz, 300/3000W ranges. 5 1/2" w x 3 3/4" h x 5 1/4" d, 1.2 lbs. **\$84⁹⁵**

► **VECTRONICS PM-30UV UHF/VHF SWR/Power Meter** (shown) As above, but covers 144, 220 and 450MHz bands. **\$84⁹⁵**



Low Cost SWR Meters



► **VANCO SWR-1** Combination Field strength and SWR meter for 3.5 - 150MHz. 52Ω, 6 1/2" w x 2 1/2" h x 2 1/4" d, 14 oz. **\$19⁹⁵**

► **VANCO SWR-2** Combination Power, SWR and Field Strength Meter for 1.7-150MHz. 0-10W and 0-100W ranges, ±10% accuracy. 52Ω, 6 1/2" w x 2 1/2" h x 2 1/4" d, 14 oz. **\$29⁹⁵**

► **VANCO SWR-3** Economy SWR meter for 1.7 - 30MHz with ±5% accuracy. 52Ω, SO-239 connectors. 2 1/2" x 3 3/4" x 3" **\$14⁹⁵**



► **B&K 390 Test Bench™ (left)** A multi-function multimeter, with AC/DC Voltmeter, AC/DC Ammeter, Ohmmeter, Capacitance Meter, 500kHz Frequency Counter and Temperature meter in one package. 0.1% DCV accuracy; Analog bargraph; Auto/manual ranging; 4,000 count LCD display; Relative mode; Min-max average; Memory; Audible continuity; Data hold. 7½" x 3½" x 1½", 17 oz. **\$134⁹⁵**

► **B&K 2860 Digital Multimeter (center)** Rugged construction with water resistant case. AC/DC Voltmeter AC/DC Ammeter (20A range); Ohmmeter; Audible Continuity Check; Diode Test. 3½ digit, 0.8" LCD readout. 6½" x 3½" x 1¼", 12 oz. **\$84⁹⁵**

► **B&K 2704A Digital Multimeter (right)** Handy for the tool kit! Measures: DCV 200mV-1000V; ACV 200mV-750V; DC and AC current to 10A; Resistance, 0.1Ω to 20MΩ; Capacitance to 20μF; and Transistor gain (uFE). 5½" x 3" x 1¼", 13 oz. **\$49⁹⁵**



► **B&K 878 Dual-Display LCR Meter with Statistical Functions** Excellent for sorting parts. Simultaneously displays measured value and Q or dissipation factor and remembers minimum and maximum values while keeping a running average of tested component values. Relative mode displays difference between the measured and reference component values. Tolerance mode "beeps" to indicate measured components outside a 1%, 5% or 10% tolerance around a reference value. Selectable, 120Hz or 1KHz. 1½" x 3½" x 7½", 14 oz. **\$219⁹⁵**

► **B&K 815 Parts Tester (center)** Tests transistors, SCRs, diodes, LEDs and batteries under actual load conditions. Capacitance 0.1pF-20mF; Resistance 0.1Ω-20MΩ, 26 ranges. Big 0.8" LCD display. 6½" x 3½" x 1¼", 12 oz. **\$96⁹⁵**

► **B&K 3011B 2MHz Function Generator (right)** Generates sine, triangle, square, pulse and ramp waveforms. TTL and CMOS Pulse outputs. 9¼" x 3¼" x 11¼", 6 lbs. **\$226⁹⁵**



General Purpose Power Supplies

Lab Quality - reverse polarity, overload thermal and short circuit protected. Tight regulation, low ripple and conservatively rated for continuous operation at maximum rating.

► **Model 1686 High Current (left)** Output: 3 to 14VDC @ 2.5 to 12A. Rated for continuous 12A duty at 13.8V DC without overheat. Reverse polarity, overload and short circuit protection. Current limiting. Connect two in parallel to double the current, or two in series to double the voltage. Coarse and fine voltage adjust and current limit. 5½" x 5½" x 12", 12 lbs. **\$169⁹⁵**

► **Model 1651 Triple Output (right)** Output: Two 0 to 24 VDC @ 0.5A; One fixed 5V @ 4A, continuous. Independent tracking, adjustable current limiting. Short circuit, overload and reverse polarity protection. 3½" x 9½" x 7½", 11 lbs. **\$359⁹⁵**

► **Scopes and Counters** For design, service or hobby. Scopes ranging from a 20MHz analog dual-trace unit to a versatile digital storage model. Multi-function counters built for continued high accuracy over a wide range of frequencies and conditions.



See the Price List for the complete B&K listing

DIGIMAX Frequency Counters

► **D-1200/D-612 Frequency Counters** Ideal for solving difficult bench and field problems involving complex PLL, TV Tuner, VTR, and computer circuits. - plus, they can help to keep your QSOs on the correct frequency! Both models meet all FCC land mobile, broadcast, and telecommunications requirements. 9 digit LED, 0.5" seven segment display, leading zero suppression for error-free readings. Built-in 10 MHz, 0.1 PPM (20°-40°C) 10MHz proportional oven. When checking audio frequency tones, the built-in audio multiplier in the D-1200 will resolve 1/1000th Hz in 10 sec., 1/100Hz in 1 sec., and 1/10 Hz in 0.1 sec. The D-612 resolves 1 Hz in 1 sec and 1/10 Hz in 10 sec. except when using the optional AM-12 audio multiplier, then the resolution is the same as the D-1200. The D-1200 also has a prescale input sensitivity control - and the D-612/D-1200 include a 1.2 GHz prescaler. Both operate from external 8-14.5VDC @ 200-500ma., internal 6 "C" cell battery pack, 115V with optional AC-12 adapter or optional BAC-12 rechargeable battery pack. 3¼" h x 8½" w x 9" d. • D-612 does not include carrying handle.



See Digimax in the Price List

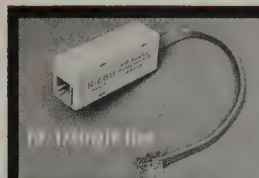
► **D-500/D-510A Frequency Counters** Excellent accuracy and high reliability, make these units the perfect choice for the bench, tool box, or ham shack. The D-500 covers 50Hz to 512MHz and will resolve 1 Hz to 50 MHz and 10 Hz to 500 MHz; the D510A covers 50 Hz to 1 GHz. and will resolve 10 Hz to 1 GHz. 8 digit LED, 0.5" high seven segment display, leading zero suppression for error-free readings. Contains a 1 PPM (17° to 35°C) TXCO time base. Operates from external 8-14.5V DC @100-250ma., 115V with optional AC-12 adapter or optional BAC-5 rechargeable battery pack. 1½" h x 5" w x 5¼" d.



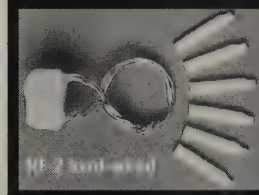
► **Optional Accessories**
AC-12 9V DC Adapter; **AM-12** 10X/100X Audio Multiplier;
AM-500X 10X/100X Audio Multiplier; **B-12** Dry Cell Holder, switch for D-612;
BAC-12 Nicad battery Pack for D-612/D-1200; **BAC-5** Nicad Battery for D-500/D-510; **RF-500X** 250W In-line RF Sampler; **T-1200** 21" BNC Telescopic Antenna.



K-COM Telephone RF Interference Filters



Stops telephone RFI caused by 3-30MHz transmitters! ...



Cure phone RFI in the most irritating cases even when dealing with full legal limit power output. Use any number of filters with no adverse effect on telephone performance. Comes fully assembled, with complete installation instructions.

► **RF-1** For single line equipment including wired and cordless telephones, answering and fax machines, modems, etc.; has standard RJ-11 modular connectors. **\$16⁹⁵**

► **RF-1/2-line** The correct filter for two-line telephone sets. Standard use or with multi-line electronic key phone systems typically found in businesses. **\$22⁹⁵**

► **RF-1/coiled** Recommended when RFI enters through the coiled telephone cord. **\$22⁹⁵**

► **RF-2** Hard-wired, provides a wide range of installation options to add RFI rejection at a variety of physical and electrical locations in the system wiring; inside phone jacks, behind wall mounted telephones, etc. **\$10⁹⁵**

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- SCOUT™**
- Frequency recorder (Pat.Pend.)
 - 10MHz - 1.4 GHz
 - Records 400 frequencies and up to 255 hits on each.
 - Reaction Tune (pat.pend.), tunes CI-V and AOR 2700/8000 receivers
 - Data transfer to PC with optional CX-12AR interface
- \$449**

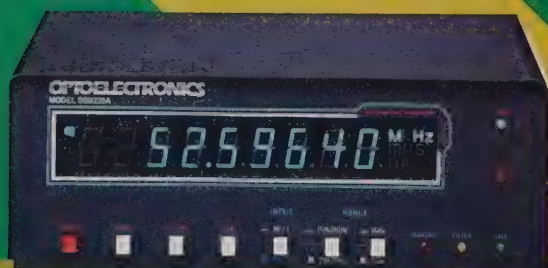


- Model 3300
Mini-Counter™**
- 1MHz-2.8GHz frequency counter
 - 10 digit LCD display
 - 6 Gate times
 - 1Hz resolution
 - Built-in NiCad batteries and adaptor included
- \$139**



- Model R10
INTERCEPTOR®**
- Self tuning Nearfield receiver
 - 30MHz - 2GHz
 - Signal strength display
 - Deviation display
 - Speaker in unit - Antenna and earphone supplied
- \$359**

And A Great Bench, Too.



- SSB220A Bench Counter**
- General purpose and Single Side Band frequency counter • 10Hz-3GHz range
 - Bright vacuum fluorescent display • 50 Ohm input for VHF/UHF use • RS232C interface via CX-12AR (optional) • External PTT and audio connectors for auto. operation.
- \$399**



- MODEL 8040 Bench Counter**
- Multi function timer/counter • 10 Hz-3GHz range • 10 digit LCD display w/ 16 segment bargraph • Full function: Frequency, Ratio, Period, Average, and Time Interval • 4 dual 50 Ohm/1MegOhm inputs • Digital filtering and Digital Auto Capture. Pat.Pend.
- \$679**

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SCOUT™ The SCOUT frequency recorder is a revolutionary device which can automatically record up to 400 unique frequencies from 10MHz - 1.4 GHz in the nearfield. The unit also features the new Reaction Tune (Pat. Pending) function which allows the SCOUT to tune any CI-V equipped receiver, and the AOR 8000 and 2700 units. The unit includes a 9 digit LCD display with full annunciators, 16 segment signal strength bargraph, EL backlight, beeper, vibrator, non-volatile memory, 10 hour rapid charge built-in Nicad batteries, AC adaptor, and a utility software disk for downloading the memory into a PC, using the optional CX12A converter.

SCOUT™\$449.00

SCOUT ACCESSORIES:

CX12A CI-V Interface.....	\$99.00
Spectrum CD ROM/FCC database.....	\$39.00
DB32 VHF/UHF Mini Antenna.....	\$29.00



R10 INTERCEPTOR® The R10 is a self tuning nearfield receiver which automatically sweeps the range of 30MHz to 2GHz in 8ms. The R10 provides a new dimension in recreational monitoring, as it allows for hands free usage with no gaps in the coverage. The unit includes a signal strength bargraph, 10K/100K switchable deviation display, speaker, volume and squelch control, a skip button to unlock a transmission, 6 hour built-in Nicad batteries, AC adaptor, telescoping whip antenna and earphones.

R10 Interceptor®\$359.00

R10 ACCESSORIES:

CF802 825-845MHz Filter/Amplifier.....	\$149.00
N100 FM Broadcast Notch Filter.....	\$99.00
BLP-70 70MHz Low Pass Filter.....	\$36.00
BHP-800 800MHz High Pass Filter.....	\$40.00
Antenna Pack 5 Antennas 27-1000MHz.....	\$99.00



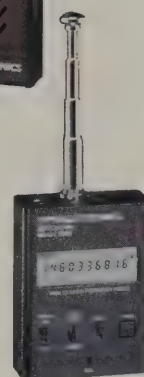
3300 MINI-COUNTER™ The 3300 Mini-Counter is a true pocket sized quality LCD frequency counter.

- Range: 1MHz - 2.8GHz • Accuracy: +/- 1ppm • 10MHz timebase
- 10 digit LCD display for maximum visibility and battery life
- 1Hz resolution in 1 second up to 250MHz
- Includes built-in Nicad Batteries and AC adaptor

3300 Mini-Counter™\$139.00

3300 ACCESSORIES:

Telescoping Whip Antenna.....	\$12.00
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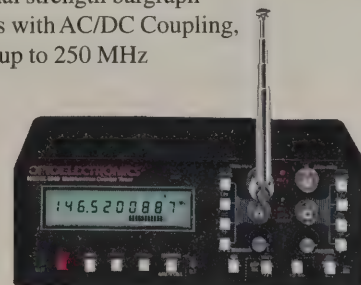
8040 The 8040 is a full feature, multi-function counter in a compact bench/portable design.

- Range: 1MHz - 3GHz • Accuracy: +/- 1ppm • 10 MHz timebase • LCD display with 16 segment signal strength bargraph
- Functions: Frequency, Period, Ratio, Average, and Time Interval • 4 Dual 50 Ohm/1Meg Ohm inputs with AC/DC Coupling, +/-Polarity, Trigger Level Adjustment, Low Pass Filter, and Attenuator • 1Hz resolution in 1 second up to 250 MHz
- Built-in RS232 computer interface • Includes AC adaptor

8040 Multi-Function Bench Counter.....\$679.00

8040 OPTIONS and ACCESSORIES:

OCXO-.05 ppm Ovenized Timebase Option	\$249.00
Rapid Charge Nicads.....	\$139.00
RS232 Interface Cable.....	\$39.00
Optolog-frequency logging software.....	\$25.00
P30 - Direct 1x/10x switchable probe.....	\$35.00

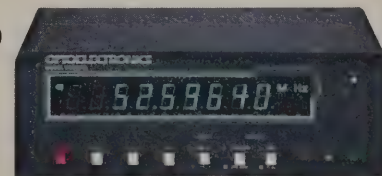


SSB220A The SSB220A is a general purpose counter which can also measure Single Side Band with a range of 10Hz-3GHz and a bright, vacuum fluorescent display. Through the use of digital synthesizer technology, the SSB220A provides stable and accurate measurement of SSB in both USB and LSB carrier frequencies. The unit may also be interfaced to an older radio with a dial to provide a frequency display. The unit includes an AC adaptor and built-in RS232 computer interface.

SSB220A General Purpose/Single Side Band Bench Counter.....\$399.00

SSB220A OPTIONS:

OCXO-.05ppm Ovenized Timebase.....	\$249.00
RS232 Interface Cable.....	\$39.00
Optolog-frequency logging software.....	\$25.00



OPTOELECTRONICS Accessories are Special Order



STARTEK INTERNATIONAL INC.

U.S. MADE FREQUENCY COUNTERS



FAST and **CONVENIENT**, **RELIABLE** and **COMPACT** describe the **STARTEK ATH™** series, **Auto Trigger & Hold** Frequency Counters.

USE to find unknown frequencies, locate RF sources, check equipment for operation and frequency calibration. Use with antenna analyzers, antenna tuning, monitor the output frequency of transmitters, signal generators and more.

POCKET SIZE for convenient portable use – internal Ni-Cad batteries and AC charger/adaptor are included.

EASY to use – no complicated controls or multi-function switches.

BRIGHT red LED digits for excellent readability and reliability.

BAR GRAPH indicating signal strength, on most models.

PREAMPLIFIER circuits are built into all **ATH™** series counters for maximized – ultra high sensitivity.

5 YEAR all parts and 1 year labor limited factory warranty.

U.S. made and very affordable – prices start under \$120.

Call AES®

for Prices & Ordering

For technical questions or model selection,
call **STARTEK** Help Line 305-537-5577

Optional #TA-90 Antenna

BAND PASS FILTERS



ACTUAL SIZE

Model 1350
Basic Model, 1-1300 MHz, Hold Sw
(No ATH or Bar Graph) \$129. **CALL**

ACCESSORIES Call For Prices

#CC-90	Soft Case for All Models
#TA-90	Telescope BNC Antenna
#TA-90-L	Telescope Elbow BNC Antenna
#RD-150	150 MHz Rubber Duck Antenna
#RD-2750	27 & 50 MHz Rubber Duck Antenna
#RD-450	450 MHz Rubber Duck Antenna
#RD-800	Cellular phone band RD Antenna
#P-110	200 MHz 1X-10X Probe
#LP-22	Low Pass, Audio Probe
#DC-10	Direct, 50 OHM Probe
#DC-5	BNC Cable to Clip Leads
#M-207-IC	Interface Cable MFJ Ant. Analyzers
#APA-9	9VDC Auto Power Adapter

FEATURES

	ATH-10 CALL reg \$179	ATH-15 CALL reg \$235	ATH-30 CALL reg \$299	ATH-50 CALL reg \$339
FREQUENCY RANGE	1 MHz - 1200 MHz	1 MHz - 1500 MHz	1 MHz - 2800 MHz	5 HZ - 2800 MHz
AUTO TRIGGER & HOLD	YES	YES	YES	YES
SIGNAL BAR GRAPH	NO	YES	YES	YES
LOW BATTERY IND.	NO	YES	YES	YES
ONE-SHOT & RESET	NO	OPTIONAL	YES	YES
HI-Z LOW RANGE	NO	NO	NO	YES

OPTION #HST-15 is a high accuracy, high stability, time base upgrade that can be ordered with any **ATH™** series model (± 0.2 PPM TCXO) **\$125 CALL**

BAND PASS FILTERS EXTEND READABILITY DISTANCE. **Call For Price**

#LP-60	DC - 60 MHz	#BP-150	130 - 500 MHz
#HP-400	400 - 1500 MHz	#HP-800	800 - 2000 MHz

All instruments are true Pocket Size:
4" High x 3.5" Wide x 1" Deep,
<14 cubic in. and are shipped
with factory installed
Ni-Cad batteries and AC
charger/adaptor.

Antennas and various
accessories are optional.

See Price List or Call AES for Pricing



Some Accessories Not Pictured

STARTEK INTERNATIONAL INC.
Ft. Lauderdale, Florida U.S.A.

IN STOCK AT AES® STORES...ORDER TODAY!

A99

10 meter Base Station Antenna

TWIN RING ADJUST-A-MATCH TUNING

The **A-99** is a half wave over a quarter wave variable mutual inductance tuned antenna for 10-17M.

It's **economical** and **easy to use!** — it features the **Solarcon Twin Ring "Adjust-A-Match"** tuning which makes it possible to tune the input to the antenna and obtain the optimum SWR over a wide range of frequencies. Optional Ground Plane Radial Kit makes it perform even better!

Simple! — raising the rings raises the frequency and lowering the rings lowers the resonant frequency.

A real beauty! — rugged three-piece white fiberglass construction with triple plated brass fittings. It's easy to assemble and install.

A-99 Specifications

Height	17 ft. 8 in.
Sections	3
Bands	10-17 meters
Gain	3 dBi
Power Limit	2000 Watts
Radiation Angle	<20 degrees
Grounding	DC Grounded
Mounting	1-1/2" mast max.
Connector	SO-239
PRICE	\$59⁹⁵
GPB-1 Ground Plane Radial Kit	\$39 ⁹⁵



MFJ Keyers, etc



► **MFJ-422C** Keyer-Paddle Combination This Keyer unit installs on top of a Bencher Iambic Paddle. If you already own a Bencher paddle, buy just the keyer unit, if not, buy the combo.

Speed is 9-50 wpm, it has adjustable weight and tone, dot-dash memories, sidetone. Semi-automatic/tune or automatic modes. Keys grid block, cathode or solid state. Requires a 9V battery or AC adapter. 4 1/2" x 2 1/2" x 5 1/2" d.

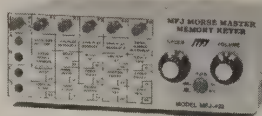
MFJ-422C Combo \$124⁹⁵ • MFJ-422CX Keyer only \$74⁹⁵

► MFJ-407C Deluxe

Electronic Keyer Features dot-dash memories, self completing dots and dashes; jam-proof spacing.

RF proof, instant start. Single squeeze, or straight key. Front panel controls: speed, weight, tone and volume, ON/OFF, tune, auto/semi-automatic. Rear switch selects A or B-type Iambic keying. Built-in speaker, requires 9V battery (not included), or optional MFJ-1312B 110VAC adapter. 7" x 2" x 6" d. **\$64⁹⁵**

► **MFJ-401C** Econo Electronic Keyer II Similar to MFJ-407C described above, but with external speed and volume controls, internal weight and tune controls. Requires a 9V battery (not included), or AC adapter **\$49⁹⁵**



► **MFJ-492** Menu Driven Memory Keyer No keypad, and no complex sequences to remember—just follow the menu! From the menu you can save and play mes-

sages, decrement serial numbers, set speed, weight, sidetone, Iambic, semi-auto, handkey, message queue, paddle command modes—turn on/off sidetone, transmitter tune, keying output on/off—select Iambic A or B, reverse paddle, Morse trainer, and store starting serial number. Commands can also be keyed from the paddle. Holds 192 characters in four soft sector message memories, and is expandable to over 8K characters in eight memories with lithium battery back-up. Front panel control for speed (5-100 WPM) and volume. Built-in sidetone speaker, direct and grid block keying output. Requires 9V battery or optional 110VAC adapter. 6 1/2" x 2 1/2" x 6" **\$89⁹⁵**

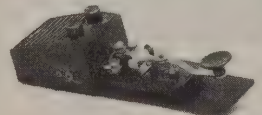
► **MFJ-493** Like MFJ-492, but with 32K characters of memory. IBM keyboard input and QSO simulator **\$129⁹⁵**

► **MFJ-490** Memory Keyer/Bencher Combo Has nearly all the features of the MFJ-492 in a compact configuration that mounts right on the Bencher Iambic paddle. 5" x 3" x 5 1/2", 9V **\$149⁹⁵**

► **MFJ-490X** Memory Keyer/Bencher Combo The MFJ-490 less Paddle and memory expansion kit not available **\$99⁹⁵**

► **MFJ-451** Morse Keyboard A stand-alone CW keyboard with 200 character type-ahead buffer, and two 100 character messages. Requires 12VDC or MFJ-1312B 110VAC adapter **\$94⁹⁵**

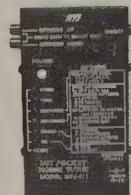
► **MFJ-452** Morse Keyboard with 16 characters LCD display. Comes with keyboard **\$119⁹⁵**



► **MFJ-557** Deluxe Code Practice Oscillator An oscillator and key mounted on a heavy non-skid base. Speaker, adjustable tone and volume controls, and earphone jack.

Uses 9V battery or opt. AC adapter. 8 1/2" x 2 1/4" x 3 3/4" **\$24⁹⁵**

► **MFJ-564** Deluxe Iambic Paddle, chrome base **\$49⁹⁵**



► **MFJ-411** Pocket-size Morse Code Tutor Take it with you and learn from zero code speed all the way to Extra Class with customized code practice. Features include Random QSO Mode, Word recognition Mode. Requires 9V battery. 3" x 1 1/2" x 5 1/2" **\$74⁹⁵**

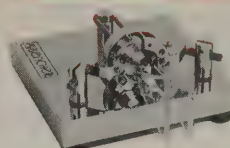
► MFJ-432 Voice Keyer

Clone your voice! Store phrases like "CQ Contest this is K9KHW..." You're 59"... QTH is Wisconsin, etc. Create and store four of your own messages totaling 20 seconds. Uses 9V battery or 110 VAC with optional MFJ-1312B. 6 1/2" w x 2 1/2" h x 6 1/2" d **\$94⁹⁵**



BENCHER

See **BENCHER** in the Price List



► **Iambic & Single Lever Paddles** (left) Highest Quality — features full range adjustment of tension and contact spacing. Self adjusting nylon and steel bearings, heavy gold-plated solid silver contact points, and polished lucite paddles. Precision machined, chrome plated brass frame, and heavy chrome, gold or black painted steel base with non-skid feet.

► **"RJ" Hand Morse Keys** (right) Features include oil impregnated sintered bearings at pivot points and stainless steel adjustment screws used throughout. A complete range of locking adjustments of all movements and tensioning is provided. Available with chrome plated or black painted steel base.

NYE VIKING Keys

► 330-001 Master Key For

the expert, but perfect for the beginner! Isolated contact assembly keeps keying circuit separate from all parts. Heavy die-cast body, no need to secure to table for stability. Gold plated silver contacts, adjustable action key arm, Navy-type knob, 3 ft. cord with phone plug, black plated finish **\$65⁰⁰**



► **SSK-001** Super Squeeze Key Use with any electronic keyer for fast, comfortable electronic keying action. Heavy, gold-plated silver contacts, nickel-plated brass hardware, and heavy base with non-skid feet **\$56⁰⁰**



► Speed-X Code Keys

Six standard models (top), four Heavy Duty models (bottom) — all with gold-plated heavy silver contacts, adjustable key action and heavy die-cast bases. Available with or without switches, brass or nickel plated hardware, standard or Navy-type knobs. Optional matching heavy steel base plate with non-skid feet.



See **NYE VIKING** in the Price List

VIBROPLEX Keys

"The Oldest Name in Amateur Radio"

► **Original "Bug"** Press the thumb piece to the right, and the vibrating bar produces one, or a string of dots — automatically. Dashes are made to the left, manually. A sliding weight adjusts the speed for 20 wpm or less. Silver contacts, non skid feet. **Standard model** has painted base and chrome top parts, **Deluxe model** has polished chrome base and top parts and fine jewel movements for smooth operation.



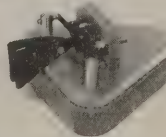
Standard (#110) — \$99⁰⁰ • Deluxe (#105) — \$120⁰⁰

► **Original Presentation** The finest quality semi-automatic key available. It offers real jewel movements and widest speed range from less than 20 to 55 wpm, plus bright chrome parts mounted on a 24-carat gold base plate **(#100) \$184⁹⁵**

► **Single lever paddle** Initiates the automatic dots and dashes of an electronic keyer. Dual paddle Iambic model allows utilization of auto. dot/dash insertion and more! **See Price List**

► **BRASS RACER IAMBIC** A solid brass Iambic paddle mounted on a polished hardwood base **(#145) \$65⁰⁰**

► **EK-1** Solid brass Iambic paddle with an 8044 electronic keyer built into the hardwood base. Iambic, dot/dash insertion, adjustable speed **(#140) \$145⁰⁰**





► **AEA IsoLoop 10-30™** A compact omnidirectional HF antenna covering 10-30MHz continuous with a 150W rating. Compact 35" diameter, can be mounted vertically or horizontally. No rotor, antenna tuner, ground plane, or ground radials are required. It's highly efficient, because it's tunable to the operating frequency by a step motor driven variable tuning capacitor, controlled from operating position. The special design also reduces TVI problems and attenuates out of band signals. The IsoLoop 10-30 is ideal for those with antenna restrictions. It's perfect for condos, apartments, attics, RV's. It comes fully assembled with power supply, manual controller unit, and 50 ft. of shielded control cable. Mast not included. 30 lbs **\$329⁹⁵**



► **AEA IT-1 IsoTuner** A state-of-the-art automatic antenna tuner for the IsoLoop 10-30. It replaces the original manual controller to provide quick automatic tuning to any frequency from 10 to 30MHz. Manual tuning is still available, if desired, via thumb-wheel. 12-button

keypad operation with audible beep; also announces completion of tuning and error conditions. Eight frequency memories. 10-segment LED bar monitors the tuning process, indicates the frequency, and displays any error codes. Memory back-up, serial computer interface with PC utility software included. 12V DC, AC adapter included. 4 1/2" h x 6 1/2" d x 5 1/2" w, 4 lb, 4 oz **\$239⁹⁵**

AEA IsoPole Omni-Directional VHF & UHF Base Station Antennas

Top performing models for 144, 220 and 440 MHz. These antennas yield the maximum gain attainable for their respective lengths, and a zero degree radiation angle which puts most of the signal right on the horizon. Exceptional decoupling results in simple tuning and a significant reduction in TVI potential and noise pick-up. Broad frequency range - typical SWR is 1.4 to 1 or better across the entire band.

Model	IsoPole 144	IsoPole 220	IsoPole 440
Frequency:	135-160MHz	210-220MHz	415-465MHz
2:1 Bandwidth:	10 MHz	15 MHz	22 MHz
Power Rating:	1 KW	1 KW	1 KW
Length:	125.5"	79.25"	46"
Wind Area:	< 1ft ²	< 0.75 ft ²	< 0.2 ft ²
Connector:	S0-239	S0-239	Type N
PRICE	\$59⁹⁰	\$49⁹⁵	\$89⁹⁰

SPECIAL!

HOT RODS...

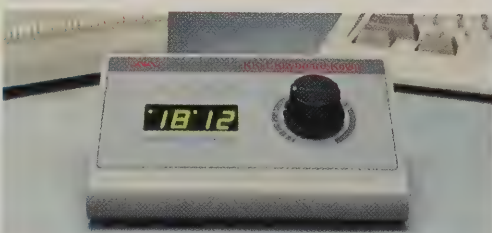


► **AEA Hot Rods** High performance 1/2-wave telescoping antennas for HTs, providing gain and extended range. No ground plane is required for efficient operation so they actually outperform the longer 5/8's. 20% shorter and lighter, which is more convenient, and places less stress on your HT. In the collapsed position, Hot Rods will perform like a helical quarter-wave. Handles over 25W, useful for portable base or mobile. BNC connector. ► **HR-1 (2M)** ► **HR-2 (220MHz)** each **\$24⁰⁰**



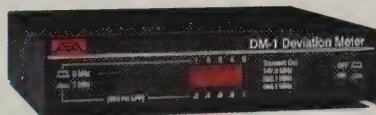
► **SWR-121 HF & VHF/UHF Graphic Antenna Analysts** These compact, battery powered units measure, compute, and present a graphical display curve of SWR versus frequency on a high resolution LCD display. They show an antennas performance over it's operating spectrum, its center frequency SWR and return loss. Range: (HF) 1-32MHz; (V/U) 120-175MHz, 200-225MHz, and 400-475MHz. Both have an SWR range up to 10:1. All functions, frequency, and display width adjustments are controlled via the front panel keypad. An RS-232 interface for IBM PC-compatible computer allows remote control, remote display, and plot saving (optional AA.Com software required). Uses 8 AA alkalines (supplied) or 12-16VDC. 8" h x 4 1/4" w x 2 1/4" d, 1 lb, 10 oz.

SWR-121 HF \$349⁹⁵ • SWR-121 V/U VHF/UHF \$399⁹⁵
AA.COM PC Software \$69⁹⁵



► **AEA KK-1 Keyboard Keyer for PC** Turns any standard AT-compatible keyboard into a feature packed Morse machine. Short-term memory, message repeat, and nestable message buffers make it versatile and easy to use. Total message capacity: 7,913 characters. Code practice mode allows you to choose between words commonly heard on the air and random groups of selectable length and difficulty. Speed is selectable from the keyboard or the front-panel knob. Also features a built-in iambic keyer and Farnsworth code practice. Cable included. **\$189⁹⁵**

► **AEA KKCOM Software for the KK-1** A DOS editing and control accessory for the KK-1. Compose and edit buffer contents right on the computer. Speed, sidetone pitch, serial number, and paddle sense can also be shown and edited. Save KK-1 messages, parameters, and buffers to a disk and reload later. Have different buffers for Field Day or for contesting - just load them in when needed. Includes computer software and serial interface. **\$49⁹⁰**



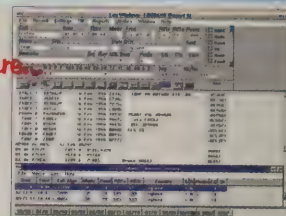
► **AEA DM-1 Deviation Meter** Measure the deviation of 144, 220, or 440MHz FM transmitters. Battery powered, crystal controlled, no tuning required. Two deviation ranges allow accurate measurement of voice, data, DTMF, and sub-audible deviation on a 10-segment LED bar display. Includes outputs for an ext. digital or analog meter, and audio. 6 1/2" x 4 1/4" d x 1 1/2" h, 1 lb. **\$159⁹⁵**



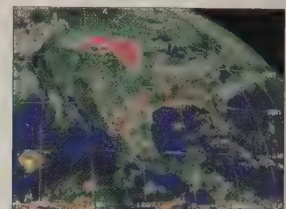
► **AEA RL-60 RadioLink** Remotely control your HF rig with your Handheld Radio. Easy plug-in interface to link your radio and a base station. Change bands, frequency, and mode from any handheld or mobile radio that has Touch Tone. Works with ICOM, KENWOOD, and YAESU radios with a computer port. **\$289⁹⁵**

► **AEA ARE-60/HL-60 HamLink** A phone controller which allows operation of your HF rig via T/T phone. Check into your favorite net or call CQ from your office, or any other location. **\$239⁹⁵**

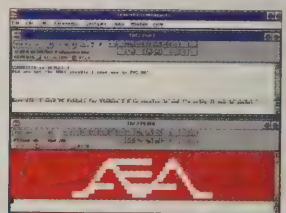
AEA Software



► **AEA Log Windows 2.0** Combines logging rig control and DX cluster monitoring with award tracking and reporting. New features include compatibility with PC PakRatt for Windows 2.0; a browser function; rotor control capability; QSL manager; a synthesized voice announcement of DX spots and more! Interfaces with SAM and Buckmaster and QRZ. Award types: UC-CA, US country; DXCC mixed, phone, CW, FSK, bands; CQ mixed, SSB, CW, FSK bands; WAS mixed, SSB, CW FSK, and bands. **\$89⁹⁵**



► **AEA FAX III** Stand-alone multi-intensity gray-scale fax demodulator and display software for IBM-compatibles. Receives 16 gray-levels on satellite maps and wire photos on VGA monitors. New features include 256-color enhancement of images; and Virtual Control modules that let you control your computer controllable Lowe or ICOM receivers allowing unattended capture of images on different frequencies. Decodes CW, RTTY & NAVTEX. Tuning scope visible even when receiving images on screen. Shielded cable, general coverage HF SSB receiver & IBM-compatible PC w/640k RAM required. **\$99⁹⁵**



► **AEA PC Pakratt for Windows 2.0** New features allow you to send, receive and display ANSI graphics for PACTOR. Works with all AEA data controllers-including the new PK-12, 1200bps TNC and the PK-96, 9600/1200bps TNC. Now compatible with Log Windows version 2.0; you can run both programs at once! Run two AEA data controllers simultaneously, minimized or from the background. Separate windows for mailbox operation and QSO logging. Requires Windows 3.1 or higher. **\$119⁹⁵**





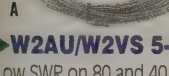
► **AEA PC Pakratt II** Split-screen terminal program for all digital and WEFAX modes. Works with IBM-compatibles and all AEA data controllers including the new PK-12, 1200 bps TNC and the PK-9600/1200 bps TNC. On-screen help menus; full QSO logging features; DOS gateway. Supports PACTOR. PK-FAX B&W fax display program. DOS 3.0 or higher is required. **\$64⁹⁵**

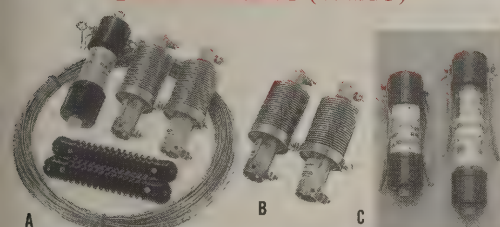
► **AEA AEA-FAXIII-900** The software-only version of the AEA-FAX package. Puts the PK-900 in Host mode and displays weather FAX pictures in up to 16 shades of gray. Also automatic receive, slide show mode, more. **\$75⁰⁰**

► **AEA COM Pakratt with FAX Split terminal program** for PK-232MBX and Commodore C64/128 operation. Includes COM Pakratt and COM FAX programs on ROM cartridge, and RS-232 to TTL interface. **\$74⁹⁵**

► **MacRatt with FAX** Software, Apple Macintosh. **\$64⁹⁵**

Belden**Coaxial Cable — See Price List under Belden**

	Belden number	RG-type	Dia. (in.)	Center conductor	Insulation type	Shield coverage	Jacket type	Imp. (Ω)	Vel. factor	Loss/100' 100 MHz
	9201	58/U	.193	#20 solid copper	Solid polyethylene	78% bare copper	PVC	53	66%	4.5 dB
	8240	58/U	.193	#20 solid tinned cop.	Solid polyethylene	95% tinned copper	PVC	53.5	66%	4.5 dB
	8259	58A/U	.193	#20 stranded tinned cop.	Solid polyethylene	96% tinned copper	PVC	50	66%	4.9 dB
	8219	58C/U	.193	#20 stranded tinned cop.	Cellular polyethylene	96% tinned copper	PVC	50	78%	4.5 dB
	8262	58/CU	.193	#20 stranded tinned cop.	Solid polyethylene	95% tinned copper	Non-contam. PVC	50	66%	4.9 dB
	9258	8/X	.242	#16 stranded copper	Cellular polyethylene	95% bare copper	PVC	50	78%	3.7 dB
	8237	8/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	PVC	52	66%	2.2 dB
	8214	8/U	.405	#11 stranded copper	Cellular polyethylene	97% bare copper	PVC	50	78%	1.8 dB
	9913	8/U	.405	#9 1/2 solid copper	Semi-solid polyethylene	100% foil + 88% braid	PVC	50	84%	1.4 dB
	9251	8A/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	Non-contam. PVC	52	66%	2.2 dB
	8267	213/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	Non-contam. PVC	50	66%	2.2 dB
	8241	59/U	.240	#22 solid copper	Solid polyethylene	95% bare copper	PVC	73	66%	3.4 dB
	8238	11/U	.405	#18 stranded tinned cop.	Solid polyethylene	97% bare copper	PVC	75	66%	2.0 dB
	8213	11/U	.405	#14 solid copper	Cellular polyethylene	95% bare copper	PVC	75	78%	1.5 dB

UNADILLA (W2AU)**W2AU/W2VS 5-Band Antenna Kit (A)**

Low SWR on 80 and 40 meters, resonant on 10, 15 and 20 meters. Includes 40 meter traps, W2AU 1:1 balun, end insulators, 120 ft. of #14 stranded copper wire, and assembly instructions. Approximately 110 ft. long, rated 2KW PEP **\$75⁰⁰**

REYCO W2VS Antenna Traps (B)

Add these traps to your dipole for multiband operation on two to six bands. **For example:** add the 40 meter pair (KW-40) and get 40 and 80 meter operation. For 10, 15, 20, 40, 80 and 160 meters, add all five pairs - 33 combinations!

Selecting Traps:

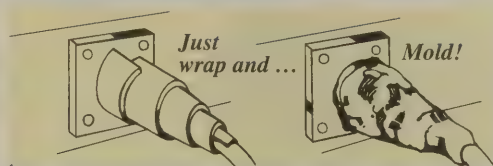
List the bands you want to cover, listing the highest frequency band first. You will need a pair of traps for each band except the one with the lowest frequency..... **See Price List**

W2AU Ferrite Baluns (C)

Provides a smooth transition from unbalanced coaxial transmission line to balanced antennas - dipoles, quads, yagis. Produces proper current distribution resulting in reduced feedline radiation for maximum power transfer, gain and reduced possibility of TVI and BCI. Replaces center insulator, DC grounded for lightning protection, has convenient center eye hook for support. Usable from 1.8 to 40MHz and rated at 2KW PEP. Available in 1:1 or 4:1 ratios, or beam balun..... each **\$21⁰⁰**

W2DU Non-Transformer Choke Baluns

High efficiency, 1:1 ratio. The HF model is the only one available that works on 160 meters! Handles VSWR up to 5:1 at legal limit, allowing use with antenna tuners. The VHF model eliminates the usual rod and tube hardware balun assembly normally used at those frequencies. Models: **HF** (1.8-30MHz), **VHF** (30-250MHz), **Beam Balun** (40-10 meters)..... each **\$23⁰⁰**

Coax Seal™ Hand Moldable Plastic for Antenna Component Protection

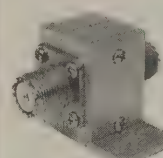
Coax Seal quickly and effectively seals all types of coaxial fittings; baluns; antenna parts and connectors of all shapes - adheres tightly to vinyl and poly vinyl coax outer jackets. Simply wrap it on like you would regular tape, then mold it to any shape. It stays flexible and sealed at any temperature for years to resist moisture penetration and deterioration. Its permanent flexibility makes it possible to remove and re-install fittings, then re-seal by simply re-forming the same material. Non-toxic, non-contaminating • Roll, 1/2" wide x 60' UNV 104..... **\$24⁹⁹**

STUF Dielectric Waterproofing Filler for Coaxial Connectors Waterproofs from the inside out!

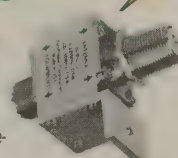
CRS STUF
\$4⁵⁰
per tube

- High purity macroscopic foam, dielectrically simulates the coaxial cable core.
- No insertion loss.
- Contains no silicones, etc. to harm cable material
- Just fill connector and tighten. Filler hydraulically channels into all connector voids and ports where moisture can infiltrate, and seals.
- Non-hardening, easy removal.
- Quick & easy.
- About 4.5¢ per connection.

PENETROX A A special anti-seizing compound for all bare aluminum to aluminum and aluminum to copper connections, and also as a thread lubricant. Apply to mating pieces of antenna components, tubing, etc. before assembly to provide a non-corrosive, low resistance, airtight seal. Makes disassembly of tubing, bolts at later date a breeze • 4 oz tube **PENETROX A** **\$7²⁰**

K-PolyPhaser CORPORATION**Lightning Protection****BROADBAND HF/VHF/UHF COAXIAL PROTECTORS**

Multi-strike capability with low strike throughput energy. Aluminum enclosure. VSWR: ≤1.1 over frequency range

**FLANGE MOUNT (left)**

IS-50UX-C0 Frequency Range: 1.5MHz to 400MHz. Maximum Power: HF 2kW, VHF 375W, UHF 125W **\$52⁹⁵**

IS-50UX-C1 Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W **\$52⁹⁵**

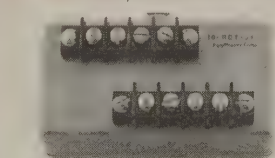
IS-50NX-C2 Range: 125MHz to 1000MHz. Max. Power: VHF 375W, UHF (low) 125W, 800MHz -1 GHz 50W. Type N **\$52⁹⁵**

BULKHEAD MOUNT (right)

IS-B50LU-C0 Frequency Range: 1.5MHz to 400MHz. Maximum Power: HF 2kW, VHF 375W, UHF 125W **\$59⁹⁵**

IS-B50LU-C1 Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W **\$59⁹⁵**

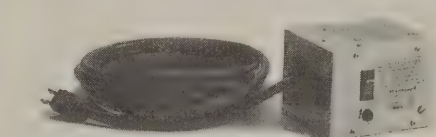
IS-B50LN-C2 Range: 125MHz - 1000MHz. Max. Power: VHF 375W, UHF (low) 125W, 800MHz-1 GHz 50W. Type N **\$59⁹⁵**

**ROTOR CONTROL 8-LINE PROTECTOR (left)**

IS-RCT Provides protection for rotor controllers, motors, control box and other nearby equipment. EMP rated - faster than gas tubes with lower turn-on voltage. Water tight enclosure with mounting stud. 7 1/2" h x 3 1/4" w x 2 1/2" d **\$46⁹⁵**

IN-LINE PHONE LINE PROTECTOR (right)

Model **IS-SPTL** Multi-stage protection, with large bandwidth and fast response time, EMP rated. For telephone trunk lines - handles standard ring voltages to 105Vrms. Handles surges up to 36 or 40kA without damaging let through voltages. Shielded metal enclosure. 1 3/4" h x 4 1/2" w x 3 1/4" d **\$57⁹⁵**

**POWER LINE EXTENSION PROTECTOR**

In-line, multi-stage EMP rated protectors provide multi-strike power line protection, filtering and proper grounding when equipment use requires an extension cord. Two outlets, master on/off switch, circuit breaker for added protection. All aluminum grounded enclosure, 4 3/4" wide. 120V AC.

IS-PLDO-120-15A with 15' cord, 120VAC @ 15A **\$143⁹⁵**

IS-PLDO-120-20A with 6' cord, 120V AC @ 20A **\$179⁹⁵**

COPPER AND ALUMINUM GROUNDING PANELS

Aluminum or copper plate. .062" panels mounted on painted off-white 1/2" plywood backing. Used to mount/ground protectors and to establish a single point location for grounding equipment racks/chassis. Mounts on 16" on center, comes with (4) concrete anchors, (10) mounting screws, 10 ft. of 1-1/2" copper grounding strap (2) brass sandwich plates and joint compound. 18" w x 12" h.

AL-SPGP Aluminum single point ground panel **\$52⁹⁵**

CU-SPGP Copper single point ground panel **\$52⁹⁵**

LOW INDUCTANCE COPPER INTERCONNECT STRAP

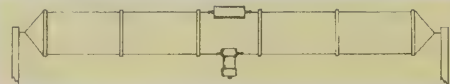
Copper strap has an advantage over wire when used for a ground path because it has lower inductance and cannot be fused open by lightning. For example: 1.5" strap has a lower inductance than #2.0 stranded wire. Easy to work with (cut, solder, etc.) - 6 AWG thickness (.0159"). Useable above or in-ground applications. Sold by the foot up to 450' lengths.

1.5" wide - **95¢/ft.** • 3" wide - **\$2⁷⁵/ft.** • 6" wide - **\$3⁹⁵/ft.**



B&W Antennas for Very Limited Space

- **AT-110 5-Band Trap Dipole** Covers 80-10M coax feed, 110 ft. long, rated 2 KW PEP. Low VSWR on 80 and 40M; somewhat higher on 10 15 and 20M - typically 2:1 to 3:1. Wire length adjustments for tuning. Preassembled **\$84⁹⁵**
- **AT-110K Kit version of AT-110** #14 stranded copperweld wire, center connector, traps and end insulators **\$69⁹⁵**
- **AT-55 4-Band Trap Dipole** Covers 40-10M, 52Ω coax feed, 55 ft. long, rated at 500W PEP. Preassembled **\$74⁹⁵**



- **AC 3.5-30 Broadband Folded Dipole** Covers 3.5-30MHz continuous with VSWR less than 2:1. 52Ω coax feed, 90 ft long, rated 2KW PEP. Install as a horizontal flattop, an inverted-V, or sloper for DX. Preassembled and pretuned **\$179⁹⁵**
- **BWD 1.8-30** Same as AC 3.5-30 but covers 1.8-30MHz continuous. Rated at 2KW PEP, 90 ft. long **\$179⁹⁵**



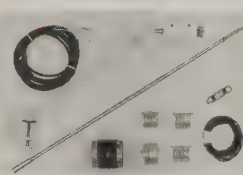
- **AC 1.8-30 Continuous Coverage End-fed "V"** Covers 1.8-30 MHz with VSWR less than 2:1, rated 2KW PEP. Requires 80 ft. of horizontal space, or when limited, can be shorted further with only a slight loss of efficiency **\$179⁹⁵**

B&W Antennas for Limited Space



- **AS-160 160/80/40/20 meter Dipole or V** 137 feet. long, half-the-length of a full-sized 160 meter dipole, yet provides excellent performance. It also gives excellent full-size performance on 80, 40 and 20 meters. Three sets of traps isolate a 1/2-wave on each band. For a better match and more bandwidth, an antenna tuner is recommended for 160M operation with "no-tune-up" transceivers. Rated at 500 watts PEP **\$139⁹⁵**
- **AS-80 80/40/20 meter Dipole or Inverted V** Construction similar to the AS-160 above, except only two sets of traps. Where space is at a premium, this antenna can provide excellent coverage of 80 meters with a shortened overall length of only 78 ft. Low SWR on all three bands. Rated at 500 watts PEP **\$109⁹⁵**
- **AS-40 40/20/25/10 meter Dipole or Inverted V** Two sets of traps, rated at 500W PEP. Overall length is 40 ft. **\$139⁹⁵**
- **AS-20 20/15/10 meter Dipole or Inverted V** Two sets of traps rated at 500W PEP. Overall length is 23 ft **\$99⁹⁵**

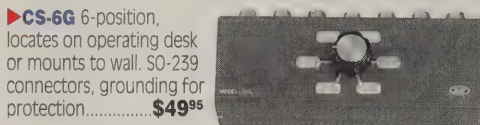
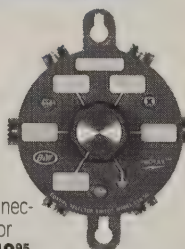
- **AXS-160 160/30 meter Dipole or Inverted V** One set of traps, rated at 500W PEP. Overall length is 96 ft. **\$99⁹⁵**
- **AXS-80 80/40/15 meter Dipole or Inverted V** Two sets of traps, rated at 500W PEP. Overall length is 64 ft. **\$99⁹⁵**
- **AP-10 Portable antenna** Only 57" with whip fully extended. Convenient for limited space in apartments, for travel, etc. Simply change coils for 2, 6, 10, 15, 18, 20, 30, or 40M. Handles 300W PEP. Mounting bracket, all coils, 10 ft. of coax and counterpoise wire **\$69⁹⁵**



B&W Coaxial Switches, etc.

- 52/75Ω coax • 2000W SSB
- Negligible insertion loss •
- VSWR less than 1.2:1 up to 150 MHz • Low crosstalk, -45 dB between adjacent outlets and -60dB between alternate outlets at 30 MHz

- **CSR-5G** 5-position, side SO-239 connectors, wall mount. Grounding position for lightning protection **\$49⁹⁵**
- **CS-6G** 6-position, locates on operating desk or mounts to wall. SO-239 connectors, grounding for protection **\$49⁹⁵**



- **VS-300A Antenna Tuner** Covers 1.8 to 30MHz, rated for 300W RF input. Matches coaxial cable, balanced line or single wire antenna. Built-in antenna switch selects one of two coaxial fed antennas, wire antenna, or bypass. Internal 4:1 balun, and meter with 300W forward and 30W reflected scales **\$99⁹⁵**

antenna. Built-in antenna switch selects one of two coaxial fed antennas, wire antenna, or bypass. Internal 4:1 balun, and meter with 300W forward and 30W reflected scales **\$99⁹⁵**

- **FL-10/1500 Low Pass Filter** Eliminates TVI due to HF (1.5-30 MHz) transmitter harmonics. 52Ω, 1000W rating. Sharp cut-off, high attenuation of undesired harmonics with less than 0.3 db insertion loss. **\$50⁰⁰**



BENCHER



- **ZA-1A 1:1 HF Balun** For 80 thru 10 meter dipoles, vees, quads and yagis. Transforms 52Ω unbalanced coaxial line to a 52Ω balanced feed. Helps reduce feedline radiation, increases efficiency and reduces the possibility of TVI and BCI. Designed without a ferrite core so it can accept a substantial mismatch at full legal power, allowing use of an antenna tuner. DC grounded for lightning protection. HWK hardware kit available for mounting to a 2" boom **\$34⁹⁵**
- **YA-1 Low Pass Filter** Reduce the possibility of TVI caused by harmonics. From transmitters operating in the 1.8 to 29.7MHz range. Rated at 1.5KW or 5KW peak. Greater than 80dB attenuation at 54MHz. 2½" w x 9½" l x 2½" h, 2 lbs **\$54⁹⁵**

Swiech Communication

- **COY2M3EL 2 Meter Portable Antenna** Three elements on a 3 ft boom delivers 4 times the Effective Radiated Power (ERP) of a dipole or J-Pole. The perfect antenna for amateurs on the go or in limited space applications. This antenna covers the entire two meter band (144-148 MHz) and assembles in less than one-minute. Great for mountain-toppling, camping, transmitter hunts, public service events and emergency operations, handles 75W. Lightweight and black anodized, 2 lbs **\$64⁹⁵**



John, AB9G sez...
"Don't forget to include Lightning Protection in your Antenna System!"
 Check ALPHA DELTA & POLYPHASE

► Hi-Q Balun

- 1:1 or 4:1 impedance ratio: For matching 52Ω unbalanced coaxial cable to 52Ω balanced feed antennas.
- For dipoles, yagis, inverted vees and doublets.
- Covers 3 to 40MHz, full legal power
- Replaces center insulator
- Reduces feedline radiation for more power into antenna, and less TVI and BCI problems.
- Built-in DC ground reduces noise and protects against lightning.
- Weatherproof. SO-239 connector and center support eye hook **\$14⁹⁵**



► Hi-Q Antenna Center Insulator

- Insulator only, no internal balun
- Replaces egg-type center insulator
- Small, rugged, lightweight, weatherproof. SO-239 connector, center supporting eye hook **\$6⁹⁵**



- **Antenna End insulators** (each) **\$3⁹⁵**
- **Dog Bone type antenna insulator** (each) **50¢**



Dipole Antennas Complete with Hi-Q 1:1 balun, #14 stranded copper antenna wire, ceramic insulators, and 100 ft. of nylon rope. Rated for legal power. May be used as an inverted Vee.

- **D-80** for 80/75m, 130 ft. ► **D-15** for 15m, 22 ft long
- **D-40** for 40/15m, 66 ft long ► **D-10** for 10m, 16 ft long
- **D-20** for 20m, 33 ft. long **See Price List**

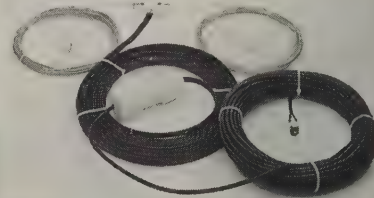
Shortened Dipoles Construction is the same and includes appropriate traps as pictured above. **See Price List**

- **SD-80** for 75/80m, 90 ft. long ► **SD-40** for 40m, 45 ft. long



All-Bander Dipole Antenna Covers 160-10M with the use of an antenna tuner with balanced output. Full 135 ft. long - or less, if installed as an inverted V or sloper; trim to fit small lots. Assembled with #14 gauge copper wire, center and end insulators and 100 ft. of 450Ω balanced line. Rated at 2KW PEP. **\$29⁹⁵**

- **SHORTY All-Bander** As above, but with loading coils to shorten the physical length to 70 ft. overall **\$39⁹⁵**



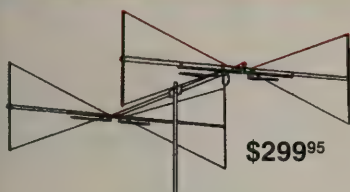
G5RV Multiband Antenna Covers 3.5 to 30MHz, and also 1.8 MHz as a Marconi type antenna with a tuner and good ground. Consists of a 102 ft. flattop with a 31 ft. section of 300Ω KW twinlead, a transformer/coupler and 70 ft. of RG-8X mini-foam coaxial cable w/SO-239 connector. 2KW PEP, assembled ... **\$50⁰⁰**

- VanGorden Ladder Line**
- 100 ft. roll, 450 Ω insulated ladder line **\$12⁰⁰**
- 1000 ft. roll, 450 Ω insulated ladder line **99⁹⁵**
- VanGorden Nylon Rope**
- NR-100 100 ft. roll, antenna guy rope **\$4⁴⁹**
- NR-1000 1000 ft. roll, antenna guy rope **39⁹⁵**
- **Special Connector...**
- Type-N male connector for Belden 9913 coaxial cable **\$4⁹⁵**

VanGorden Ready-Made Coax Assemblies

Convenient lengths (6 to 100 ft.) of quality RG-8X mini-foam or RG-213 coaxial cable with Silver-Plated-Teflon dielectric PL-259 connectors already installed **See Price List**

BUTTERNUT HF Antennas



\$299⁹⁵

The HF-5B "Butterfly"™ COMPACT BEAM for 10-12-15-17-20 meters

- Unique design reduces the size but not the performance. • No lossy traps – the entire element radiates.
- 3dB gain on 20 meters, up to 5dB on 10 and 15 meters – equivalent to rotary dipole performance on 17 meters.
- Boom length: 6 ft., wingspan: 12½ ft., handles 1.2 KW final input.
- 2.9 sq. ft. wind area, weighs 17 lbs, turns easily with a TV rotor, with up to 1½" mast.

Verticals

Uses Highest-Q tuning circuits
(no lossy traps) to out-perform other
multi-band designs of comparable size.

Model HF-6VX (left) \$199⁹⁵

- Automatic bandswitching on 80, 40, 30, 20, 15 and 10 meters.
- Add-on kits for 160, 17 and 12 meters
- 26 ft. tall, self-supporting, legal limit.

Model HF-2V (right) \$189⁹⁵

- Automatic 80/40 meter bandswitching, add-on units for 160 or 30 meters.
- Low Angle of radiation – great for DX!
- 32 ft. tall, self supporting, handles the legal RF power limit.

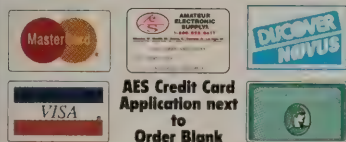


MFJ

►MFJ-1796 1/2-wave Vertical Antenna 6 Bands – One Antenna! Great Performance!

Ground independent—operate 40, 20, 15, 10, 6 and 2 meters without a ground or radials. Automatic bandswitching, low-angle and omni-directional radiation for great DX. Self-supporting and just 12 ft. tall, with a 24 inch footprint – mounts anywhere from ground level to roof-top. E-Z to tune, handles up to 1500 watts PEP SSB power **\$179⁹⁵**

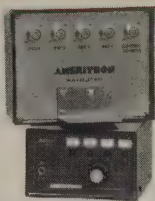
10 Bands – One Antenna!
►MFJ-1798 1/2-wave Vertical Antenna
Similar operation as MFJ-1796, but 10 bands. Covers 75/80, 40, 20, 15, 10, 6 and 2 meters. 20 ft. tall, E-Z to assemble **\$249⁹⁵**



AES Credit Card
Application next
to
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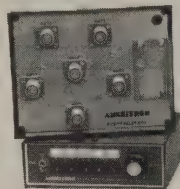
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AMERITRON Coaxial Switches



►**RCS-4 Remote Coaxial Switch**
Provides convenient selection of up to four different HF antennas while using just one coaxial feed line, and no additional control cable. The weatherproof switch box locates out on the tower, mast or at another remote location. The control box located at your operating position, switches antennas with a control voltage routed directly through the coaxial cable. Rated for 1.8–30MHz, and handles the legal amateur power limit... **\$124⁹⁵**

►**RCS-8V** Independently or simultaneously selects up to five different antennas using just one coaxial feed-line and a single 8-wire control cable. Internal wiring allows user to ground or float unused terminals as required. Rated to handle 5KW below 30MHz, and 1KW up to 150MHz **\$139⁹⁵**



GAMBER JOHNSON

►**SS-100** Convenient, avoid theft! Radio slides in and out of mount instantly – without having to attach or remove cables. Power, Ground, Antenna, and Speaker leads connect and disconnect automatically. RF components are designed for a low SWR up to 500MHz. Adapts to most radios; bracket adjusts to case and can be conveniently attached above or below the radio unit .. **\$49⁹⁵**

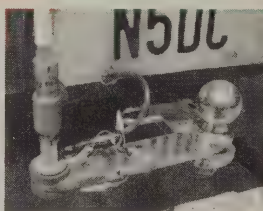


Super Slide
Radio Mount

►**SS-101** Extra base for multiple vehicle use..... **\$29⁷⁵**

DC SALES 'Tenna Hitch'

Consists of a heat treated, high strength aluminum bracket with an insulated standard. 3/8" x 24 thread antenna mounting stud. Just install under the ball of your Class-I or Class-II trailer hitch and attach the coaxial cable. Rugged!—handles the largest mobile antennas, and does not interfere with trailer towing capability. No holes to drill, all hardware supplied **\$32⁹⁵**



EDCO

►**TX-146**
Intermodulation Filter
Solves intermod problems by simply adding back in what the newer wide-band radios leave out — a high quality helical filter. The EDCO hi-tech, 3-stage, fully automatic filter will attenuate signals outside the 2 meter band by as much as 40dB when switched on!

Simply connect the TX-146 inline with the radio's 2M antenna line (or the VHF side of the duplexer in dual-band installations) and hook the filter up to +12VDC. An R.F. sensing circuit automatically switches relays to bypass the filter during transmit, at up to 50W. Includes an on/off switch and L.E.D. power-on indicator— switch the filter off when it's not needed **\$89⁹⁵**



OAK BAY Technologies

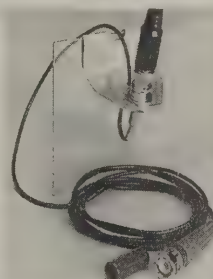


►**LP-11P Commercial Grade Low Pass Filter** Installs in transmission line between HF Transmitter and power amplifier or tuner. Eliminates TVI by filtering out transmitter generated harmonics that could fall within TV

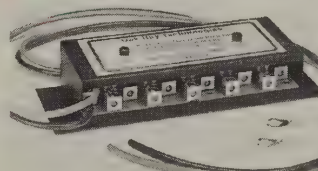
bands. Eleven pole Chebyshev design covers 1.8 thru 30MHz with <.5dB insertion loss, an upper cutoff frequency of 41MHz and 80dB of ultimate attenuation. 50Ω, handles 1 KW RF. **\$69⁹⁵**

►**LP-50 Low Pass Filter** for 1.8 thru 54MHz **\$69⁹⁵**

►**AM-101B Rubber Duck Window Mount** Improves HT performance when operating mobile by getting RF out of the car. Great for emergencies, rental cars, etc. The custom stainless steel bracket slips on the top edge of car window, and the rubber duck antenna from your HT attaches to the BNC mount on the outside. Comes with 6 ft. of RG-174U coax with BNC connector. 50Ω, handles 15W, dual/twin band compatible **\$24⁹⁵**

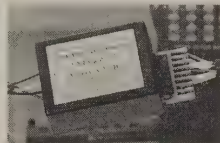
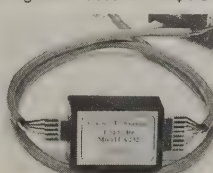


►**PS-101 High Current 12V Power Strip** Make just one connection to power your source (battery, power supply, etc.) to conveniently distribute power to multiple devices. Provides five outputs with two fused at 20



Amps, and three at 30 Amps. Rugged screw and clamp connections. Rated to handle 50 Amps total current. Comes with 5 ft. of #8 gauge hook-up wire, terminal lugs and fuses **\$79⁹⁵**

►**CA-232U Uni-Cable™** Interface A universal Packet TNC cable that provides interfacing between popular TNCs and all popular VHF/HF transceivers. No soldering required, easily programmed by user to mate with 8-pin mic. connectors..... **\$34⁹⁵**



►**CA-232HH Uni-Cable™** Interface Connects popular TNCs to popular handhelds that use 2.5mm and 3.5mm microphone and earphone jacks. No soldering required **\$34⁹⁵**

HYGAIN/TELEX

►**2400-155 Contester** A high quality headset and boom mounted noise canceling microphone combination with 100-8000Hz response for maximum QSO intelligibility. The boom rotates and can be worn on either side, and the microphone automatically shuts off when placed upright. The dynamic headphones have comfortable foam cushions with removable washable socks **\$79⁹⁵**



AES® Internet E-Mail Address: aesham@execpc.com

Store Hours: Monday–Friday 9:00 A.M. to 5:30 P.M. • Saturday 9:00 A.M. to 3:00 P.M.

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AMECO

► **PT-3 Preamplifier** Covers 160 thru 6 meters and useable with either a receiver or transceiver. Tunable low noise dual gate FET circuit provides more than 20dB gain with low noise figure and improved spurious and image rejection. RF sensed switch with variable delay automatically bypasses to antenna on transmit. Second receiver and antenna capability. 12V DC. 2 1/2" h x 8 3/4" w x 6 1/2" d **\$119⁹⁵**

► **P-12T** 12V DC power supply for above **\$9⁹⁵**

► **TPA Tunable Preamp and Active Antenna** A dual function receiver accessory. May be used with an outside antenna as a tunable preamplifier with more than 20dB gain and low noise figure, or as an effective indoor active antenna using the built-in 30" collapsible whip. Covers 2 to 30 MHz in 5 bands. 9V DC. 2 1/2" h x 8" w x 6 1/2" d **\$69⁹⁵**

► **P-9T** 9V DC power supply for above **\$9⁵⁰**

High Pass Filters Stops TV, FM and VCR interference caused by harmonics and signal overload from amateur transmissions, etc. Installs at TV antenna input terminals or connector. Sharp frequency cut-off at 52MHz with 70dB attenuation below 50MHz. Models for 75Ω or 300Ω TV antenna lead-ins or 75Ω cable systems.

► **Model HP-300T** (300Ω) • ► **HP-75T** (75Ω) each **\$12⁹⁵**

► **OCM-2** Combination Code Practice Oscillator and CW Monitor with volume control, 3" speaker, and headphone terminals. Requires a code key and 9V battery. Kit **\$19⁹⁵** • Wired **\$24⁹⁵**

► **K-1** Low-cost general purpose key with phenolic base, adjustable tension and contact spacing. **\$7⁹⁵**

► **K-4** Deluxe high quality key. Polished brass base, and shorting bar. **\$12⁹⁵**

FCC Test Manuals New revised editions Incorporating all the latest changes in FCC amateur radio test preparation requirements. Separate manuals are available for the Novice, Technician and the New No-Code Technician Classes All current FCC examination questions for each class, with corresponding multiple choice answers.

Complete Morse Code Course

For IBM PC/XT/AT or 100% compatible. Menu driven, contains over 18 options. Generates random characters, numbers and punctuation at any speed and tone. Generates infinite random QSO's-similar to FCC/VEC exams at any speed and tone. Sends text from any external data file, more! ► **107-PC-2** **\$29.95**

More Ameco Publications & Code Courses-See Price List

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THE SMILEY ANTENNA CO.

Hand Tuned Antennas for your Hand Held Radios



Each Smiley handheld antenna is individually hand tuned to resonance at band center under normal operating conditions. (No ground plane - No radials). Manufactured from the finest heat-treated copper plated spring steel coils. Cold rubber compound is used for coil insulation and a neoprene heat-shrink coating applied for strength and endurance. All have BNC connectors.

► **THIN STICK** 1/4 wave telescoping dual band antenna for 144 and 220MHz bands (TS) **\$16⁹⁵**

► **SUPER STICK II (A)** 2 meter, 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain fully extended (54"); usable fully collapsed, or one section 1/4 wave. Length: 54" extended, 10" collapsed (SS-II) **\$19⁹⁵**

► **SUPER STICK II COMBO** As above but includes a 2 meter Stubby Duck antenna (D) (SS-II/COMBO) **\$26⁹⁵**

► **5/8 SLIM DUCK (B)** 2-meter, 5/8-wave, 7db gain, flexible base loaded antenna. 12" long (5/8 SLD-2) **\$17⁹⁵**

► **5/8 SLIM DUCK COMBO** As above, but includes a 2 meter Stubby Duck antenna (D) (5/8 SLD-2 COMBO) **\$24⁹⁵**

► **REGULAR DUCK (C)** For 2 meters. Tuned Ducks show a 3db gain over other Rubber Ducks because they are impedance matched for hand-helds. (RD-2) **\$14⁹⁵**

► **STUBBY DUCK (D)** Tuned, efficient, for 2M (RDS-2) **\$14⁹⁵**

► **SUPER STICK III** 220MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain extended; usable collapsed, or a one section 1/4 wave. 36" extended, 8 3/4" collapsed (SS-III) **\$19⁹⁵**

► **SUPER STICK III/COMBO** As above but includes a 220MHz Stubby Duck antenna (G) (SS-III/COMBO) **\$26⁹⁵**

► **5/8 SLIM DUCK (E)** 220MHz, 7db gain, flexible base loaded antenna. Length: 9" (5/8 SLD-220) **\$17⁹⁵**

► **5/8 SLIM DUCK COMBO** As above, but includes a 220MHz Stubby Duck (G) (5/8 SLD-220 COMBO) **\$24⁹⁵**

► **REGULAR DUCK (F)** Tuned for 220MHz (RD-220) **\$14⁹⁵**

► **STUBBY DUCK (G)** Tuned for 220MHz (RDS-220) **\$14⁹⁵**

► **SUPER STICK IV (H)** 440MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain extended; usable collapsed, 18" extended, 5 3/4" collapsed (SS-IV) **\$19⁹⁵**

► **SUPER STICK IV COMBO** As above but includes a 440MHz Stubby Duck (K) (SS-IV/COMBO) **\$26⁹⁵**

► **SLIMLINE (I)** 440MHz, 1/4-wave flexible ant (SL-440) **\$12⁹⁵**

► **5/8 SLIM DUCK (J)** 440MHz, 7db gain, flexible base loaded antenna. Length: 5" (5/8 SLD-440) **\$17⁹⁵**

► **5/8 SLIM DUCK COMBO** As above, but includes a 440MHz Stubby Duck (K) (5/8 SLD-440 COMBO) **\$24⁹⁵**

► **STUBBY DUCK (K)** Tuned for 440MHz (RDS-440) **\$14⁹⁵**

► **MINI DUCK (L)** Tuned for 440MHz (RDMD-440) **\$14⁹⁵**

► **FLEX-COIL (M)** 2 meter, 1/2-wave, 7-9 db gain, flexible base 35" fully extended (FLX 1/2 WAV2M) **\$25⁹⁵**

► **270A (N)** Telescoping 2m/440 gain antenna. 1/4-wave (2m) 5/8-wave (440 MHz) **\$19⁹⁵**

► **TAQ** 1/4-wave whip, specify 2M, 220 or 440MHz **\$10⁹⁵**

There's a Smiley for your every need!

PALOMAR Engineers

► **PK-200** Dual Paddle Key for Iambic keyers Precision made by Jones of England and imported by Palomar. Smooth solid iambic action by rotary ball bearings enclosed in a machined brass block on steel base. Adjustable spring tension, paddle height and paddle spacing. Gold-plated contacts. Each has an engraved serial number **\$159⁹⁵**

► **PT-340** Tuner-Tuner (right) Eliminate tune-up QRM and overheated final tubes and devices by adjusting your station antenna tuner without transmitting. Installs permanently between rig and antenna tuner. Simply it on, and listen to the noise output from the Tuner-Tuner in your receiver, adjust your station tuner for a dip in the noise (null); that's it! Covers 1.7 to 30MHz. Requires 9V battery. 6" x 5" x 3" **\$99⁹⁵**

► **M-840** SWR & Power Meter Two bright 30-segment LED displays show PEP or average power and SWR instantaneously and simultaneously, without calibration - just select the range you need for the rig or amplifier you are using. Covers 1 to 30MHz with 2, 20, 200 and 2000 watt power ranges. Shows VSWR 1.0 to 10:1+. Remote sensor with 6 ft. cable. Requires 10-15 VDC @ 800ma. 4 1/4" w x 4 1/4" h x 2 1/4" d, 1 lb. **\$189⁹⁵**

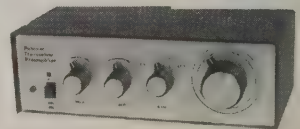
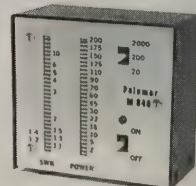
► **RX-100** Noise Bridge Just One measurement tells if your antenna is resonant, and if not, whether it is too long or too short. Shows resistance and reactance values of coax fed antennas from 1-100MHz. Install between receiver and feedline. Tune receiver to frequency and adjust controls for a noise null and interpret the readings according to instructions. Useful for off-the-air tune-up of transmitters and tuners, and to adjust tuned circuit resonance. Uses 9V battery. 5 1/4" x 3" x 1 1/4" **\$79⁹⁵**

► **New! SMB-5** Software program for AT-compatible computers. Uses RX-100 noise bridge readings taken at the transmitter to compute and plot antenna resistance, reactance and SWR. On 3-1/2" disk with manual **\$29⁹⁵**

► **SB-4** Balun Matches 50Ω to 200Ω. For high SWR applications in multi-band dipoles, antenna tuners, open wire line to coax conversions. Covers 1.7-30MHz, rated for 6KW PEP or 2KW CW; usable at full rated power with up to 10:1 SWR. Teflon insulation, epoxy encapsulated, stainless steel eyebolt on top for support. 4" dia. x 4" high, 2 lb. **\$79⁹⁵**

► **P-410X/412X** Preamplifiers for Transceivers Covers 160-6M in four ranges. Installs easily in-line between transceiver and antenna. Improves reception with a high-quality preamplifier with adjustable gain up to 20dB. It provides lower noise figure, better selectivity and overload capability. Automatic bypass switching to antenna on transmit. 3" h x 8 3/4" w x 5" d. ► **Model P-410X** (115V) or ► **P-412X** (12V) each **\$169⁹⁵**

See Index for more Palomar products



Power Station

3,6,9,12V DC / Power Supply + Battery

SB-752



1. LED Charging Indicator
2. DC 3-6-9v Selector Switch
3. Charge Input Cigarette Socket
4. DC 3-6-9v Output Connector
5. Voltmeter
6. LED Power "On" Indicator
7. Main Power On/Off Switch
8. DC 12v Output Cigarette Socket
9. Output (+ -) Terminal-15A

7 lb. H8" W7" X 4.5"
Quick charging AC adaptor & car
cable included.

Base Antenna

DUAL BAND/HIGH GAIN

- Lowest VSWR
- Heavy Duty Fiberglass
- Include all mounting hardware

A-200 1 SEC. 5.9' 4.5/7.2db

A-300 2 SEC. 11' 6.5/9db

A-1000 3 SEC. 17.5' 8.5/11.8db

Mounts



CM-1, CM-2 BNC CLIP
Angle Adjustable

WA-1 BNC
Window Mount

TA-1 Angle Adjustable Trunk
Mount NMO/UHF

MC-1 Hi-Flux Magnet
Mount NMO/UHF

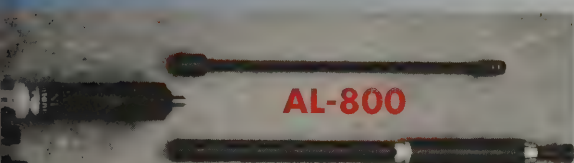


DX-2, Duplexer &
TX-3 Triplexer

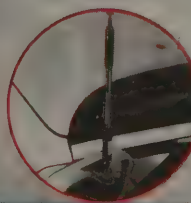
TA-2 Trunk Mount &
Cable UHF/NMO

MT-1
SWR/POWER METER

2 IN 1 High Gain Antenna



AL-800



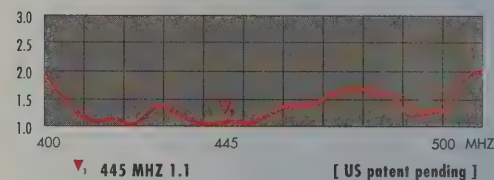
✓ Now you can have a high gain antenna on your dual band HT with the AL8000. ✓ An impressive gain 3.2 dBd on 2meters and 5.6 dBd on 70 cm lets you enjoy dependable QSO's, where other antennas would fail, (and it collapses for convenience). ✓ For additional compactness, the telescoping section can be quickly replaced with the rubber whip, giving you 2 ANTENNAS in 1. ✓ Both ways have an excellent VSWR with or without groundplane.

AT-2 Series Broad Band Antennas

- Maximum Gain
- Maximum Band Width
- Heavy Duty Stainless Steel, Double Spring Loaded
- Weather Proof
- Fiber Glass

EXTRA **3 YEARS WARRANTY ***

AT-2	146 / 445 MHZ 3/5 db
AT-2+	146 / 445 MHZ 4.1/6 db
AT-2A+	146 / 220 MHZ 4.1/4.8 db
AT-2+ Tri	146/ 220/445 4.1/4.8/6 db



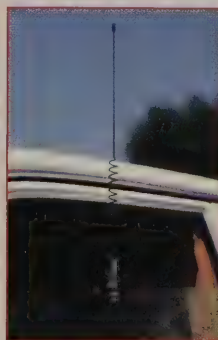
* See ANLI warranty policy



Ham Radio Antennas

RD-78 OVER 30,000 UNITS SOLD

- 1 RD-8: Dual Band & 900MHz 6" Wide-Band, also for scanning
- 2 AL-800: 2 IN 1. 144/445 3.2/5.6db
- 3 RD-78: Dual Band & 900MHz 2.15/3db 5" Wide-Band, also for scanning
- 4 S-1: Dual Band 2.15/3db 50W 14"
- 5 AT-3: Dual Band 2.15/3db 100W 1'5" UHF only
- 6 AT-2: 200W 2' Broad Band NMO only
- 7 AT-2+: Multi-Band Hi-Gain Mobil Antenna 3'6" NMO only
- 8 AT-4: Dual Band 3/5.5db Fold over, 3'2", NMO/UHF



**S-1 (Antenna)
WA-1 (Mount)**

With the WA-1 Windows Clip Mount, you can mount your H.T.(or ANLI S-1) Antenna to your car window or sunroof.



**Featuring the COMET
Exclusive SLC System:**

- **Linear Coil for Maximum Gain**
- **Soldered Element Joints**
- **ABS Radome Joints: Weather Proof/Invisible to RF for the Finest Radiation Pattern**

GP-3 • Dual-band 146/446MHz Base Repeater Antenna
Gain & Wave: 146MHz 4.5dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 •
Max Pwr: 200W • Length: 5'11" • Weight: 2lbs. 9ozs. •
Conn: Gold-plated SO-239 • Construction: Single-piece fiberglass

GP-6 • Dual-band 146/446MHz Base Repeater Antenna
Gain & Wave: 146MHz 6.5dBi 5/8 wave x 2 • 446MHz 9.0dBi 5/8 wave x 5 •
Max Pwr: 200W • Length: 10'2" • Weight: 3lbs. 8ozs. • Conn: Gold-plated SO-239 •
Construction: Fiberglass, 2 Sections

GP-9/GP-9N • Dual-band 146/446MHz Base Repeater Antenna • BEST SELLER!
Gain & Wave: 146MHz 8.5dBi 5/8 wave x 3 • 446MHz 11.9dBi 5/8 wave x 8 •
Max Pwr: 200W • Length: 17'8" • Weight: 5lbs. 11ozs. • Conn: GP-9 Gold-plated
SO-239 • GP-9N Gold-plated N-type female • Construction: Fiberglass, 3 Sections

CA-62DB • Mono-band 6 Meter Vertical
Gain & Wave: 52MHz 6.5dBi 5/8 wave x 2 • Max Pwr: 500W • Length: 21'8" •
Weight: 5lbs. 11 ozs. • Conn: SO-239 • 2MHz band-width after tuning (6M) •
Construction: Thick-wall aluminum, 5 sections

CX-333 • Tri-band 146/220/446MHz Base Repeater Antenna
Gain & Wave: 146MHz 6.5dBi 5/8 wave • 220MHz 7.8dBi 5/8 wave x 3 •
446MHz 9.0dBi 5/8 wave x 5 • Max Pwr: 120W • Length: 10'2" • Weight: 3lbs. 1oz. •
Conn: Gold-plated SO-239 • Construction: Fiberglass, 2 Sections

GP-15 • Tri-band 52/146/446MHz Base Repeater Antenna
Gain & Wave: 52MHz 3.0dBi 5/8 wave • 146MHz 6.2dBi 5/8 wave x 2 •
446MHz 8.6dBi 5/8 wave x 4 • Max Pwr: 300W • Length: 5'11" • Weight: 3lbs. 1oz. •
Conn: Gold-plated SO-239 • Construction: Single-piece fiberglass

COMET has an extensive line of
Mono-Band/Dual-Band/Tri-Band Antennas
for Base Station and Repeater use.

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NCG Company at 800/962-2611. Use **COMET** products, and enjoy amateur radio to it's fullest!

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CH-32
Miracle Baby
146/446MHz
HT Antenna
Gain: 0dBi
Length: 1.75"
Conn: BNC

- Gold-Plated Connectors
- High-Quality Craftsmanship
- Unique Fold-Over Feature



NEW Z750 • Dual-band 146/446MHz w/fold-over • Includes COMET exclusive theft-resistant lock!
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 446MHz 5.5dBi 5/8 wave x 2 • Length: 39" • Conn: Gold-plated PL-259 • Max Pwr: 200W

NEW Z780 • Dual-band 146/446MHz w/fold-over • Includes COMET exclusive theft-resistant lock!
146MHz 6/8 wave 4.5dBi • 446MHz 5/8 wave x 3 7.2dBi • Length: 62" • Conn: Gold-plated PL-259 • Max Pwr: 150W

FJ-15S • Tri-band 52/146/446MHz w/fold-over
Gain & Wave: 52MHz 0dBi 1/4 wave • 146MHz 4.5 dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Length: 58" • Conn: PL-259 • Max Pwr: 120W

SB-7/SB-7NMO • Dual-band 146/446MHz w/fold-over
Gain & Wave: 146MHz 4.5dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Length: 58" • Conn: SB-7 PL-259/SB-7NMO NMO • Max Pwr: 70W

SB-5/SB-5NMO • Dual-band 146/446MHz w/fold-over
Gain & Wave: 146MHz 2.5dBi 1/2 wave • 446MHz 5.5dBi 5/8 wave x 3 • Length: 39" • Conn: SB-5 PL-259/SB-5NMO NMO • Max Pwr: 70W

CX-224/CX-224NMO • Tri-band 146/220/446MHz w/fold-over
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 220MHz 3.5dBi 5/8 wave • 446MHz 6.0dBi 5/8 wave x 2 • Length: 36" • Conn: CX-224 PL-259, CX-224NMO NMO • Max Pwr: 100W

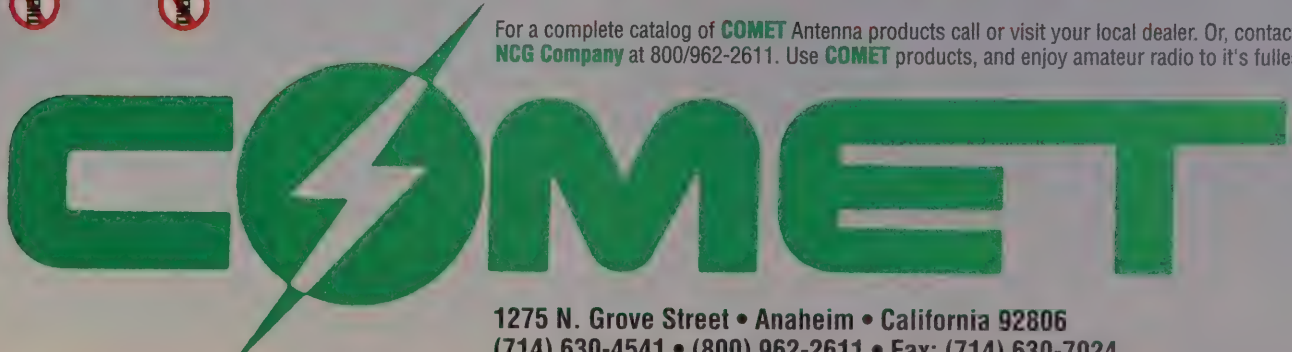
B-20/B-20NMO • Dual-band 146/446MHz w/fold-over
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 446MHz 5.0dBi 5/8 wave x 2 • Length: 30" • Conn: B-20 PL-259/B-20NMO NMO • Max Pwr: 50W

SH-55 • Super Flexible 146/446MHz HT Antenna
Gain: 146MHz 1.5dBi • 446MHz 3.2dBi • Length: 15.5" • Conn: BNC • Max Pwr: 10W

B-10/B-10NMO • Dual-band 146/446MHz cellular look-a-like • Gain & Wave: 146MHz 0dBi 1/4 wave • 446MHz 2.15dBi 1/2 wave • Length: 12" • Conn: B-10 PL-259/B-10NMO NMO • Max Pwr: 50W

COMET Specializes in a wide assortment of Mobile Mounting Systems that require NO HOLES. A variety of trunk lid, hatch-back, rain gutter, roof rack and window mounts are available along with low loss coax cable assemblies, for the ultimate mobile station!

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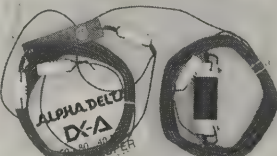


AES® and Alpha Delta Solve Problems ...

Limited Space High Performance Antennas

STAINLESS STEEL HARDWARE • FULLY ASSEMBLED • SEVERE WEATHER RATED COMPONENTS • NO-TRAP DESIGN

Unlike the usual trap antenna, there are no capacitors to break down under high RF voltages. Full legal power operation – with "ISO-RES" inductors and 12 gauge insulated solid copper wire. 50 Ω direct coax feed, an antenna tuner is usually not required when operating in the resonant bands, but may be safely used for multi-band operation if desired.



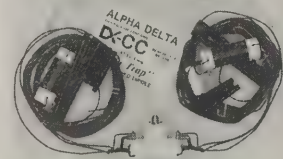
DX-A/DX-SWL Configuration



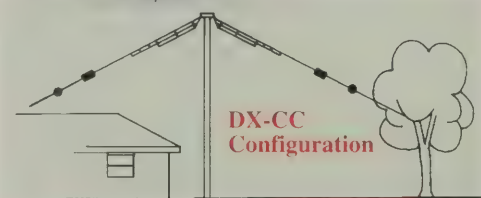
► **Model DX-A** 160-80-40 Meter 1/4-Wave Twin Sloper. A top low frequency DX antenna. Combines the tremendous DX fire-power of the 1/4-wave sloper with the wide bandwidth of the 1/2-wave dipole. One leg is 67', the other 55' – installs like an inverted-V with ground return thru tower or down-lead. **\$59⁹⁵**

► **Model DX-B** A single wire, high performance 1/4-wave DX sloper antenna for 160, 80, 40, and 30 meters. Designed for limited space installations where room doesn't allow for the DX-A twin sloper. Requires only 60 ft. overall and provides amazing DX performance at installation heights of only 35 ft., and with the low end at only 8 ft. This permits operation on those low bands for those hams previously not able to join in on the fun because of space limitations. It's pre-assembled and pre-tuned. Just put it up and start enjoying low band operation. Utilizes stainless-steel hardware, 12 gauge solid copper wire and efficient Alpha Delta "Iso-Res" RF choke coils. To gain the same broadbanded performance like the DX-A, the DX-B is also designed to be used with a wide range antenna tuner, so no trimming or tweaking is necessary. 50 Ω coax feed, rated for full legal power. **\$69⁹⁵**

► **Model DX-SWL** SWL Broadcast Sloper Covers 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90, and 120 meter short-wave plus AM broadcast bands. Sloper design provides outstanding reception of low-angle DX signals. Multi-band 2KW transmit capability with an appropriate antenna tuner. Overall length is 60 ft. **\$69⁹⁵**



► **Model DX-CC** "No-Trap" 80-40-20-15-10 meter Dipole or Inverted-V. Overall length is 82 ft. **\$99⁹⁵**

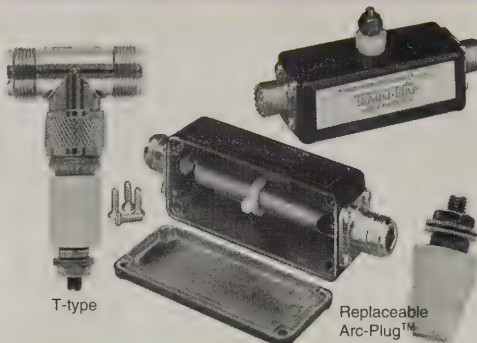


DX-CC Configuration

► **Model DX-DD** "No-Trap" 80 and 40 meter Dipole or Inverted-V. Overall length is 82 ft. **\$79⁹⁵**

► **Model DX-EE** "No-Trap" 40-20-15-10 meter Dipole or Inverted V. Will also cover 30-17-12 meters with a proper antenna tuner. Overall length is 40 ft. **\$89⁹⁵**

Transi-Trap® Surge Protectors



Alpha Delta Transi-Trap Surge Protectors These are gas surge arresters which will protect your valuable ham equipment much more effectively than the lower cost air-gap types.

The heart of the unit is the **Arc-Plug™**, which consists of two electrodes hermetically sealed in a gas filled ceramic cylinder. It acts like a voltage dependent switch that can repeatedly carry large currents for brief periods of time. When a voltage surge occurs on your transmission line, an arc forms between the electrodes allowing it to conduct harmlessly to an independent ground connection, reducing feedline voltage to less than 30 volts. That's protection!

An Arc-Plug can discharge 1000's of normal surges without replacement, and the life of the device is a function of the surge current amplitude and duration. After a sufficient number of discharges there is a gradual lowering of the breakdown voltage and insulation resistance. Replacement indicated by an increase in VSWR. If a unit is "hit" with a big strike, it is designed to fail "shorted", giving an instant indication that replacement is needed. Other brands fail "open", which leaves your expensive equipment unprotected without you knowing it.

Highest quality, finest materials. – heavy cast aluminum housing, brass constant-impedance (50 Ω) element, brass ground hardware and only Amphenol connectors are used.

Standard Transi-Trap units are the choice of the U.S. Military, many government agencies, worldwide. The design is based on the U.S. NCS T1885-10 Bulletin covering lightning and EMP (electromagnetic pulse) protection.

Transi-Trap Protectors are designed for 50 Ω coaxial cable and are available with standard SO-239 connectors or N-type connectors which extend operation through 1 GHz.

Five different models to choose from –

► Model RT 200W thru 500 MHz.....	\$32⁹⁵
► Model RT/N 200W thru 1GHz	\$39⁹⁵
► Model HV 2KW thru 500 MHz	\$35⁹⁵
► Model HV/N 2KW thru 1GHz	\$42⁹⁵
► Model LT "T"-type, 200W thru 30 MHz	\$22⁹⁵



New!

► **Model DX-ULTRA** Shortwave Dipole Antenna covering AM Broadcast thru 30MHz. Efficient, low-noise, broadband performance for Medium Wave, Tropical, International SW, Military, Government, Embassy, Maritime, Aircraft, Commercial and Utility frequencies. Designed with ISO-RES inductors, parallel wire elements and the exclusive DELTA-C Center Insulator with the built-in SEP ARC-PLUG® Static Electricity Protector. Over all length is 80 ft. – install as a dipole, inverted-vee, or full sloper. Can be used with a tuner as a transmit antenna at power levels up to 2000W. Connectors will accept either coaxial cable or balanced line. Comes fully assembled, ready to go! **\$119⁹⁵**



Lightning Surge Protected 2 & 4 Position Coax Switches



Alpha Delta Coaxial Antenna Switches are made only in the U.S.A. The extremely high quality custom design features a cast housing with a constant impedance micro-strip cavity for outstanding performance through UHF.

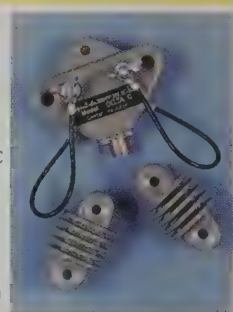
No lossy wafer switches are used, and a solid positive detent roller bearing switch drive leaves no-doubt to which position is selected. The unused antenna circuits are automatically grounded to reduce antenna interaction, noise and the effects of lightning. For the antenna circuit that is in use, the famous replaceable **Alpha Delta Arc-Plug™** Cartridge provides continuous protection. Antenna switched in or out, you're well protected both ways! The Arc Plug is easily accessed through front panel so you may permanently mount the switch to any surface. Both the two and four position models handle full legal amateur power.

Four different models to choose from ...

► DELTA-2 2-position coaxial switch with SO-239 connectors, rated for up to 500MHz	\$49⁹⁵
► DELTA-2/N 2-position coaxial switch with N-type connectors, rated for up to 1.3 GHz	\$64⁹⁵
► DELTA-4 4-position coaxial switch with SO-239 connectors, rated for up to 500MHz	\$74⁹⁵
► DELTA-4/N 4-position coaxial switch with N-type connectors, rated for up to 1.3 GHz	\$89⁹⁵

Antenna Hardware Kit

Don't assemble your next dipole antenna without one of these CENTER and END insulator combos. They're designed for strength, and to provide equipment protection with a built-in replaceable SEP ARC-PLUG® Static Electricity Protector. Ideal for dipoles, Vees, zepps and other wire antennas. Rated for full legal power, also perfect for all kinds of SWL receive antenna applications; and can be fed with either coax or balanced line.



The SEP ARC-PLUG protector which is mounted in the DELTA-C center insulator "bleeds off" slow rising static electricity charges and routes them harmlessly to ground, before they can enter the shack thru the feedline. This is far more effective than DC grounded baluns or chokes, which can be "popped" by static charges. Dangerous static charges are developed from thunderstorms, high wind driven snow or desert sand, and have been measured to several thousand volts; so potent, they can actually puncture the dielectric of unterminated coaxial cable.

The DELTA-C center insulator and DELTA-CIN end-insulators are fabricated with an extremely rugged UV and RF resistant DELTALLOY material that is so tough, you can drop it off a roof without damage. You no longer need to rely fragile ceramic or glass insulators. Only stainless steel hardware used in the center insulator for salt air and other corrosive environments, and all internal connections are hard soldered for highest reliability.

► DELTA-C Antenna hardware kit: center insulator, 2 end-insulators, and SEP ARC-PLUG Static Electricity Protector	\$29⁹⁵
► DELTA-CIN End-insulators (separate)	EACH \$1⁰⁰

The right antennas for every ham.

The "R" series antennas have revolutionized the way hams look at verticals. Dedicated hams all over the world have tried the R5 and R7 and have been amazed that these compact, rugged verticals can perform the way they do. The outdated idea that a vertical antenna is a serious compromise has been put to rest. Not only are these antennas compact and able to fit just about anywhere, but they're built strong and built to last.

The R5 and R7 are the result of decades of experience in antenna design. They have proven themselves on Arctic DX-peditions, tropical island contest stations, ocean vessels and even on a hot air balloon trip. Their greatest success, though, has been in amateur home stations throughout the world where they provide exceptional performance.

Whether you understand the technology involved or not, know that these compact antennas perform like no others. Tune in on 10 to 40 meters and talk to many enthusiastic R5 and R7 owners.

- **No Ground Radials**
- **Compact Size**
- **Low Angle Radiation**
- **Automatic Band Switching**
- **Broadband Matching**
- **Mount Anywhere**
- **No Moving Parts**

MODEL	R5	R7
Frequency, MHz	28, 24, 21, 18, 14	28, 24, 21, 18, 14, 10, 7
Gain, dBi	3	3
Electrical Wavelength	Halfwave	Halfwave
SWR 2:1 Bandwidth	10 m-2 MHz	10 m-2 MHz
	12 m-100 KHz	12 m-100 KHz
	15 m-450 KHz	15 m-450 KHz
	17 m-100 KHz	17 m-100 KHz
	20 m-350 KHz	20 m-150 KHz
		30 m-50 KHz
		40 m-75 KHz
Power Rating, Watts PEP	1800	1800
Radiation Angle, Degrees	16	16
Frequency Selection	Automatic	Automatic
Horizontal Rad. Pattern Deg.	360	360
Height, ft (m)	17 (5.2)	22.5 (6.9)
Mast Size Range, in	1.5-1.75	1.5-1.75
	(cm) (3.8-4.4)	(3.8-4.4)
Wind Load, ft2 (m2)	1.4 (.13)	2.25 (.21)
Weight, lb (kg)	8.7 (4)	12.3 (5.6)
49" Counterpoise Radials Supplied	4	7

10, 12, 15, 17, 20 Meters



Thousands of R5's are currently in use by satisfied hams worldwide. This compact, 17 foot high halfwave has gained popularity because of its reputation for uncanny performance level's and the fit-anywhere convenience of a vertical without ground radials. Put the world in your log book on 10 through 20 meters with the Cushcraft R5 halfwave vertical.

"It did everything I hoped and more. . . In 27-1/2 hours of operating over 5-1/2 days, we made 2788 CW QSO's with 87 countries. . ."

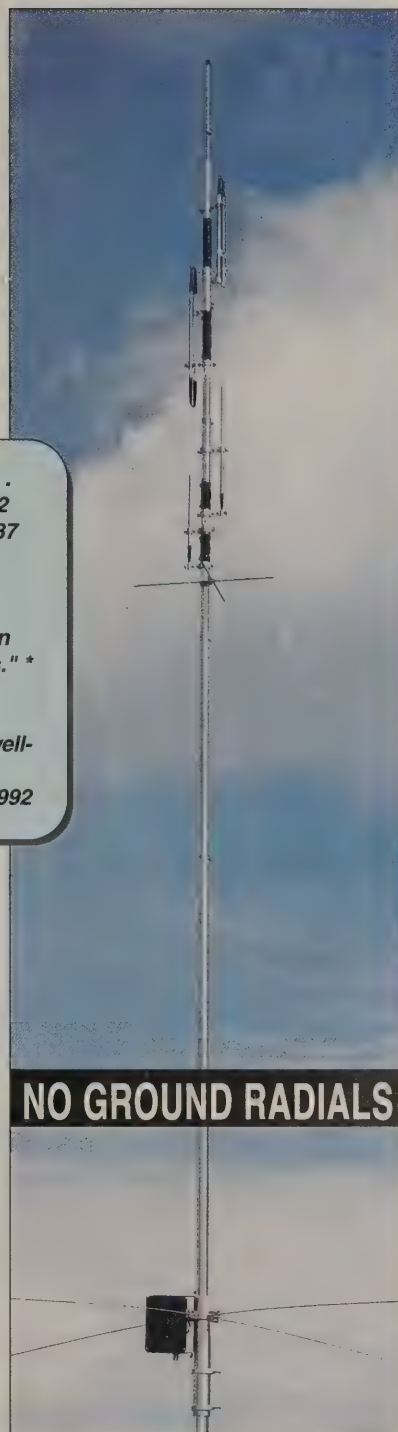
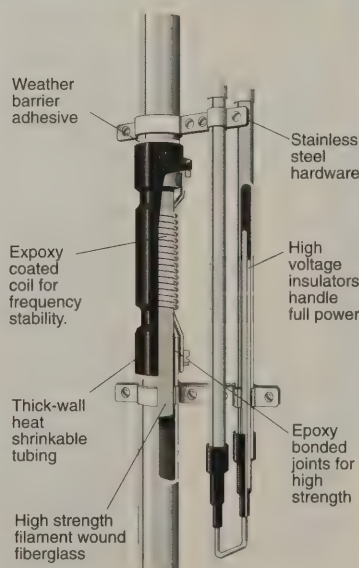
QST, Oct. 1990

*"I had used the antenna with my RV in Mexico and worked over 80 countries." **

CQ, Nov. 1989

*"I must congratulate Cushcraft for a well-made, easy-to-use antenna." **

Practical Wireless, Sept. 1992



"The antenna was of vital importance to me as I used it twice a week to speak to my wife and children back in New York." (WA2RUD / 5H3WL / 5Z4PI)

"The R5 works superb. Best DX vertical I ever had during 30 years of ham practice." (DJ8WI)

"Everything assembled beautifully and how nice not having to have an antenna tuning unit when band changing." (G4JZK)

"Thanks for designing such an excellent antenna that provides so much fun for us apartment dwellers." (N1LKH)

10, 12, 15, 17, 20, 30, 40 Meters



This 22 foot marvel packs a punch on 10 to 40 meters that has to be experienced to be believed. With only 7 short counterpoise rods, the R7 will fit just about anywhere. If you're looking for the most performance in the smallest package then the R7 is for you. Precisely

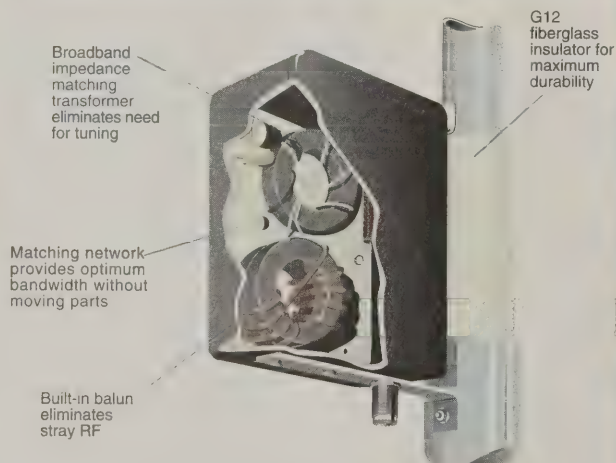
tuned radio frequency traps optimized for each band and strategically placed X-hats enable the R7 to radiate a low angle signal that makes working DX a snap. Experience 7 band performance anywhere with the incredible R7.

*"It's an excellent solution for somebody who's looking for a low-profile homestation antenna that works well on 40 through 10 meters. . . ideal for portable operation because it easily breaks down into a small package, and you don't have to worry about a radial system or finding trees for supports." **

QST, August 1992

*"The instructions are very detailed and clear. . . the antenna goes together in about 30 minutes. . . running 100 Watts and using the R7 I managed to work DXCC (actually 117 countries). . . hardware is of very outstanding material, and the antenna is best described as rugged." **

CQ, August 1992

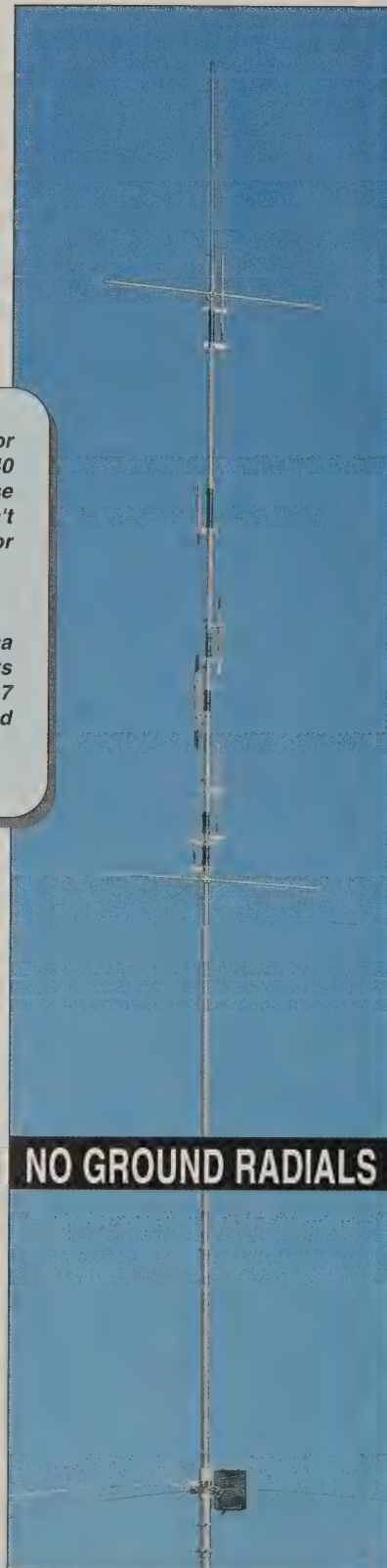


"Excelentes resultados con la R7" (XE1USN)

"It performed excellently even under extreme weather conditions both electrically and mechanically." (3Y2GV) Antarctica

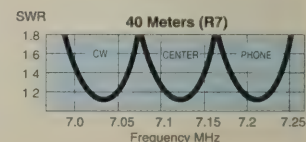
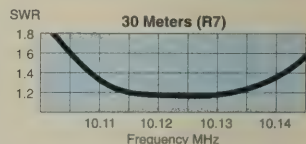
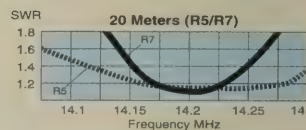
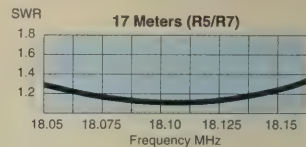
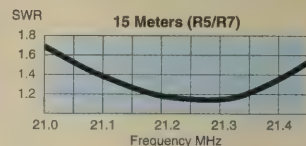
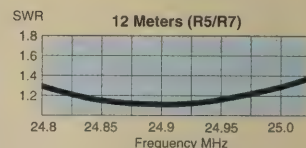
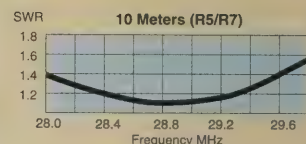
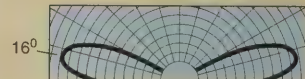
"Tropical storm Zelda struck Kwajalein on Thanksgiving Day. . . As the beams blew down, my R7 vertical stayed up." (V73CT)

"Used R7 on IOTA EU-135 expedition. . . Beautiful performance!" (SM3DMP)



The R7 and R5 do not need ground radials. Because of their compact size, they are perfectly suited for almost any limited space application. Whether you're operating from a balcony, RV, rooftop or mobile environment, you will find the R7 and R5 to be exceptional performers.

RADIATION ANGLE



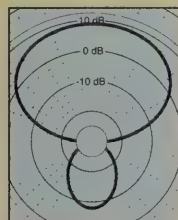
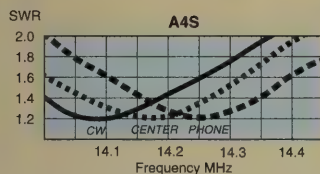
10, 15, 20, 40 Meters

Cushcraft Tribanders Make More DX Fun!

Our three and four element tribanders provide the versatility and performance that you need for reliable communication around the world. And they last! Cushcraft's World Rangers are made with 6063-T832 aluminum tubing, weatherproof traps, and fiberglass insulators to stand up to the weather. Our World Rangers have 50 Ohm twin terminal connectors and need no balun. They are designed with fewer parts for easier assembly, lower weight and less windload. You will spend your time in the shack, not on the tower!

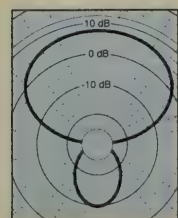
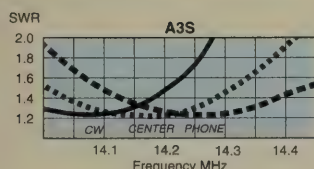
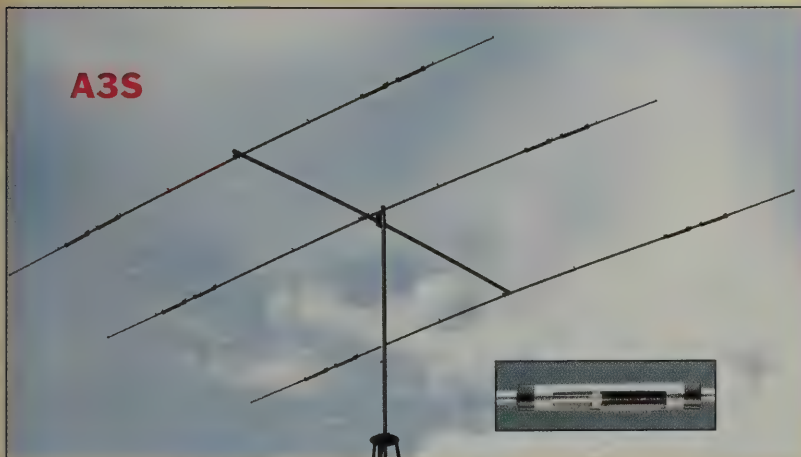
Ham radio is a lot more fun when you have a dependable antenna like our World Ranger. Make your choice from our A4S, A3S and A3WS models. Add a 30 or 40 meter kit to make your antenna even more versatile!

A4S with add-on kit



A4S
RADIATION
PATTERN

A3S



A3S
RADIATION
PATTERN

A4S Four Element Beam

With stainless steel hardware.

The A4S is the true, high performance tribander. Precisely tuned high-power traps, carefully selected element lengths, and proper spacing combine to make the A4S the preferred antenna for your contest work! This is the premium antenna with all the features that you want. High gain, low SWR, and wide bandwidth keep the contacts coming in. All U-bolts, clamps and hardware are stainless steel. The A4S has pinned boom sections and formed aluminum brackets to keep elements straight under all conditions. And our solid construction keeps the A4S on the tower!

A3S Three Element Beam

With stainless steel hardware.

The A3 World Ranger, our top selling tribander, has become the A3S with all stainless steel hardware. It's a real power-house in a small space and lets you work the pile-ups with confidence. All you need is a lightweight tower and rotator to enjoy the benefits of the A3S. It's a proven performer in DX-peditions and contests and handles full power from your linear. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware.

When space is at a premium, but you want the benefits of a full-size tribander, the A3S is right for you!

MODEL	A4S	A3S
Frequency, MHz	28, 21, 14	28, 21, 14
No. Elements	4	3
Forward Gain, dBd	8.9	8
Front to Back Ratio, dB	25	25
SWR 1.2:1 Typical		
2:1 Bandwidth KHz	>500	>500
Power Rating, Watts PEP	2000	2000
3 dB Beam Width, Deg. E Plane	58	60
Boom Length, ft (m)	18 (5.48)	14 (4.27)
Boom Diameter, in (cm)	2 (5.10)	1.5 (3.81)
Longest Element, ft (m)	32 (9.75)	27.75 (8.45)
Element Center Dia, in (cm)	1.25 (3.18)	1.25 (3.18)
Turning Radius, ft (m)	18.4 (5.49)	15.5 (4.72)
Mast Size Range, in (cm)	1.25-2.00 (3.18-5.08)	1.25-2 (3.18-5.08)
Wind Load, ft ² (m ²)	5.50 (0.51)	4.36 (0.47)
Weight, lb (kg)	37 (16.8)	27 (12.9)

30 and 40 Meter Add-On Kits

40 meters will come alive by adding one of these kits to the dipole of your A3S or A4S. The kits include high power traps with heavy wall fiberglass insulator and all hardware. A simple adjustment allows 30 meter operation. For our newest beam, the A3WS, we have a 30 meter add on kit the A103.

- A743** 7 MHz/10 MHz kit for A3S
- A744** 7 MHz/10 MHz kit for A4S
- A103** 10 MHz kit for A3WS

MODEL	A743/A744	A103
BAND	7 MHz (40 m)	10 MHz (30 m)
Driven Element with Adapter kit, ft (m)	33.19 min. 35.33 max. (10.12-10.77)	27.12 min. 28.4 max. (8.27-8.66)
Windloading ft ² (m ²)	.58 (.05)	.27 (.03)
Bandwidth, KHz	125	150
Power Rating, Watts	2000 PEP	2000 PEP
Side Rejection, dB	20	20
Weight, lb (kg)	3.44 (1.56)	2.29 (1.04)

10 through 20 Meters

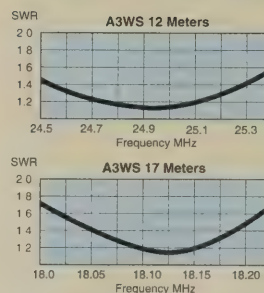
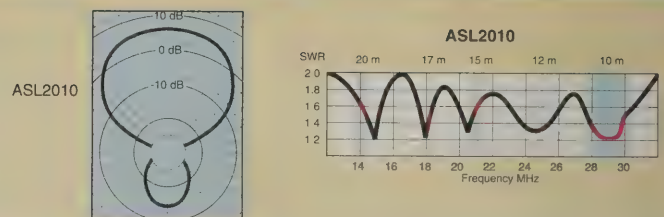


Skylog

- Continuous five band coverage from 13.5 to 32 MHz
- Constant gain over entire frequency range
- 6.4 dBd gain, 65 degree beamwidth
- High efficiency design, antenna stays cool and VSWR steady
- 18 foot boom and 19.5 foot turning radius

This all new log periodic antenna is the most cost effective, high gain, five band antenna solution on the market today. Skylog offers continuous operation from 13.5 to 32 MHz. Antenna gain and beamwidth are constant for uniform coverage from 10 through 20 meters. The ASL2010 is rated for continuous duty at full legal power. Skylog is designed for maximum gain on a manageable 18 foot boom with only 10.1 square feet of wind surface area. All stainless steel hardware and rugged element design are only some of the many features that provide years of superior antenna performance. Skylog ASL2010 is the smart choice for multiband HF operation.

MODEL	A3WS	ASL2010
Frequency, MHz	24, 18	13.5-32
No. Elements	3	8
Forward Gain, dBd	8.0	6.4
Front to Back Ratio, dB	25	15-20
SWR 1.2:1 Typical		
2:1 Bandwidth	300 KHz	18.5 MHz
Power Rating, Watts	2000 PEP	2000
3 dB Beam Width, Deg. E Plane	60	65
Boom Length, ft (m)	14 (4.27)	18 (5.48)
Boom Diameter, in (cm)	1.50 (3.81)	2.0 (5.08)
Longest Element, ft (m)	25.1 (7.66)	38 (11.58)
Element Center Dia, in (cm)	1.25 (3.18)	1.25 (3.18)
Turning Radius, ft (m)	14.4 (4.4)	19.25 (5.86)
Mast Size Range, in (cm)	1.25-2 (3.18-5.08)	1.5-2 (3.18-5.08)
Wind Load, ft ² (m ²)	4.1 (.38)	10.1 (.93)
Weight, lb (kg)	22.5 (10.2)	55 (25.5)



A3WS WARC Bands 3 Element Beam

Enjoy the excitement of our newest HF bands with this all new beam. The A3WS gives full performance on 12 and 17 meters. With the addition of our easy-to-use A103 add on kit, it will also cover 30 meters. A3WS needs only a lightweight tower and rotator or you can mount it above an existing tribander. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware. Take charge of 12, 17 and 30 meters with the new A3WS.

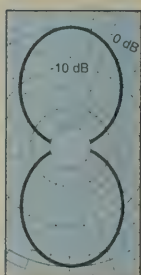
Rotatable Dipoles

Our World Ranger Dipoles give bi-directional patterns and rotatable convenience. You can mount them high and away from the trees for better performance than a wire dipole. These single and multi-band dipoles feature high-performance traps, heavy wall tubing, and rugged hardware for years of enjoyment.

D3W World Ranger Dipole

The perfect answer for the WARC bands. This rotatable dipole is easily mounted on the same mast as your existing tri-bander or other antennas. With a bi-directional pattern it will give you amazing performance on the new bands.

MODEL	D40	D4	D3	D3W
Frequency, MHz	7	28,21,14,7	28,21,14	24,18,10
SWR 1.2:1 Typical				
2:1 Bandwidth, KHz	200	>350	>500	>200
Power Rating				
Watts PEP	2000	2000	2000	2000
Length ft (m)	42.25 (12.88)	35.8 (10.92)	25.8 (7.86)	34.0 (10.37)
Mast Size, in (cm)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)
Wind Load, ft ² (m ²)	1.3 (.12)	1.3 (.12)	.9 (.08)	.9 (.08)
Weight, lb (kg)	12 (5)	13 (6)	9 (4)	11 (5)



Typical Dipole Radiation Pattern

10 Through 80 Meters

Limited space or budget? Want a low angle of radiation for more DX contacts? Consider using a Quarterwave vertical. These antennas require a good ground system, usually created with radials. The resulting antenna system gives you the most HF bang for the buck. If you want to cover several bands, the AP8A, AV3 or AV5 is the answer. To improve your stations performance on 75/80 meters, use the AV80. With any of these models, excellent DX will be yours within hours.



80 Meter, AP8A, AV3 AND AV5 REQUIRE RADIALS

NEW 80 Meter Vertical

For a special antenna on 75 and 80 meters, consider the NEW Cushcraft AV80. This time tested design features a top loading coil and a four element capacitive top hat. The radiator is 36 feet (10.9 M) long and 2 inches (5 cm) O.D. Its matching network allows immediate QSY'ing from the DX phone band to the DX CW band. Or, it could be set entirely in either the phone band or the CW band. The AV80 will take all the power you want to feed it. The matching network components are overrated to operate up to 1500 Watts. The AV80 is designed to match impedances with up to 5 Ohms of ground loss. It works well with 4 radials elevated 8 to 10 feet (2.4-3 M) off the ground or 16 quarterwave radials if ground mounted. Ground mounting the antenna would require a more extensive radial system. AV80 is an excellent choice for multi-element arrays.

AP8A, Eight Bands In One Tough Antenna

The AP8A is the next generation eight-band quarterwave that has been strengthened with thick wall tubing, up to three layers deep in some sections, and high tensile strength fiberglass. The traps have been beefed up to handle the legal limit and are moisture sealed. You can be up and running on 10 through 80 meters in no time. (The APR-18A Radial Kit will make the job even easier.) The key to the AP8A's eight band coverage is the automatic bandswitching and efficient traps. The traps are parallel LC circuits which allow broadband operation. The AP8A is a very popular antenna with new hams because it's such a great value. Eight bands in one rugged antenna at an affordable price.

APR18A Radial Kit

The Cushcraft APR-18A radial kit is the perfect match for the AP8A, AV3, AV5, or any quarterwave amateur HF vertical where a good low angle signal on the horizon and a low VSWR are important. The kit offers maximum performance on all HF bands and consists of only 9 multiple and single-conductor radials, with a maximum length of only 31 feet. It's great for quick installation at either ground level or rooftop sites.

AV3 Three Band & AV5 Five Band

Our AV3 handles 10, 15, and 20 meters with fine performance and easy assembly. It has the same rugged construction as the AV5. The AV5 works with the popular 10, 15, 20, 40 and 80 meter bands with broad bandwidth and full legal power. For versatility, this is the antenna for you!

MODEL	AP8A	AV80
Frequency, MHz	28, 24, 21, 18, 14, 10, 7, 3.5	3.5
Electrical Wavelength	1/4	1/8 wavelength to top hat
SWR 1.2:1 Typical		
2:1 Bandwidth	Full Band Except 40M>150 KHz & 80 M>80 KHz	With proper ground
Power Rating, Watts PEP	2000	1500
Radiation Angle, degrees	18	18
Horizontal Radiation Pattern, degrees	360	360
Height, ft (m)	26 (7.92)	36 (10.97)
Mast Size Range, in (cm)	1.5-1.75 (3.8-4.4)	1.5-1.75 (3.8-4.4)
Wind Load, ft ² (m ²)	1.7 (.16)	4.2 (.42)
Weight, lb (kg)	9.5 (4.3)	20 (9.1)
Radials Required	Normally	Normally
Radial Kit Available	Yes, APR18A	APR80A

MODEL	AV3	AV5
Frequency, MHz	28, 21, 14	28, 21, 14, 7, 3.5
Electrical Wavelength	1/4	1/4
SWR 1.2:1 Typical		
2:1 Bandwidth	Full Band	Full Band except 80 M>70 KHz
Power Rating, Watts PEP	2000	2000
Radiation Angle, degrees	18	18
Frequency Selection	Automatic	Automatic
Horizontal Rad. Pattern, deg.	360	360
Height, ft (m)	14 (4.2)	25 (7.4)
Mast Size Range, in (cm)	1.5-1.75 (3.8-4.4)	1.5-1.75 (3.8-4.4)
Wind Load, ft ² (m ²)	1.02 (.1)	1.89 (.19)
Weight, lb (kg)	5 (2.3)	8 (3.6)
Radials Required	Normally	Normally
Radial Kit Available	Yes, APR18A	Yes, APR18A

10, 15 Meters



10 Meters

The three element model is a great selling antenna! If you have the space, and need the utmost in performance, then try our four element Skywalker. You can't go wrong with these contest winners, especially if you are a Novice new to ten meters!

MODEL	10-4CD	10-3CD
Frequency, MHz	28.0-29.7	28.0-29.7
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	>900	>1400
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Deg. E Plane	56	57
Side Lobe Attenuation, dB	40	40
Boom Length, ft (m)	16 (4.88)	10 (3.05)
Boom Diameter, in (cm)	2.0	1.63-1.50
	(5.08)	(4.1-3.8)
Longest Element, ft (m)	17.58 (5.34)	17.66 (5.38)
Element Center Dia, in (cm)	.88-.63	.88-.63
	(2.2-1.6)	(2.2-1.6)
Turning Radius, ft (m)	11.5 (3.5)	10 (3.05)
Mast Size Range, in (cm)	1.5-2.0	1.5-2.0
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft ² (m ²)	3.1 (.29)	2.3 (.21)
Weight, lb (kg)	18 (8.16)	11 (5.00)

More Performance Than You Ever Imagined

More contacts, less waiting, less interference, and a better signal at the other end are yours with a Skywalker!

Computer-aided design helped us maximize forward gain while reducing sidelobes and SWR. Our 50 Ohm Reddi-match feed uses a UHF SO-239 for easy connection.

Construction features include improved larger diameter pinned booms with fewer sections, heavy-wall heat treated 6063-T832 aluminum tubing, stainless steel fasteners, worm drive element clamps, and carefully formed aluminum brackets.

Assembly is easy and installation can often be done by one person! Skywalkers are contest winners. One of these fine antennas is perfect for you.



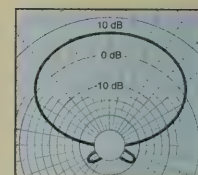
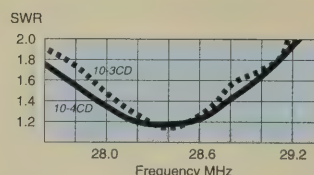
10-3CD

15 Meters

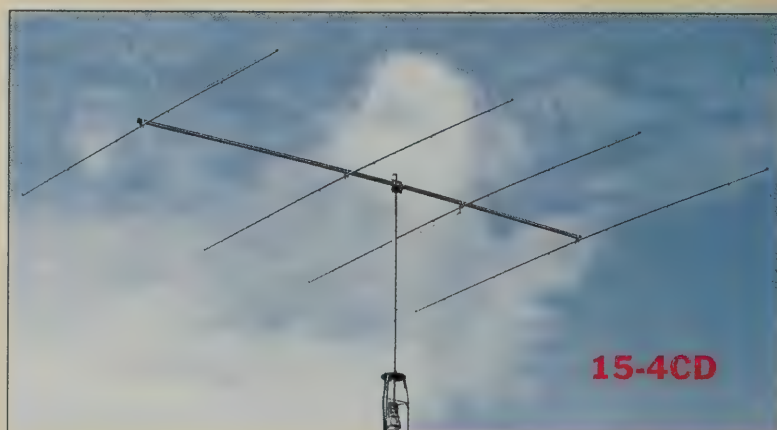
These two Skywalkers will keep you enthusiastic about 15 meters. Our three element model gives fine performance in limited areas. For maximum gain, select the four-element model with its new 2" diameter boom. Or, try stacking two four element Skywalkers for incredible performance! Reddi-match tuning makes it easy.

The 10dB forward gain of our 15-4CD is the result of computer design and will keep you the first in line during pileups!

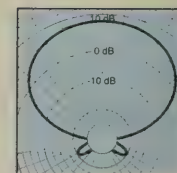
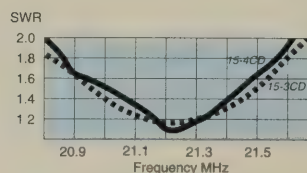
MODEL	15-4CD	15-3CD
Frequency, MHz	21.0-21.45	21.0-21.45
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	500	500
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Deg. E Plane	56	57
Side Lobe Attenuation, dB	>40	>40
Boom Length, ft (m)	20 (6.10)	14 (4.27)
Boom Diameter, in (cm)	2.0	2.0
	(5.08)	(5.08)
Longest Element, ft (m)	23.33 (7.11)	23.16 (7.06)
Element Center Dia, in (cm)	1 (2.5)	1 (2.5)
Turning Radius, ft (m)	15.4 (4.72)	13.5 (4.11)
Mast Size Range, in (cm)	1.5-2.0	1.5-2.0
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft ² (m ²)	4.5 (.42)	3.4 (.32)
Weight, lb (kg)	25 (11.34)	20 (9.07)



Typical 3 Element Pattern

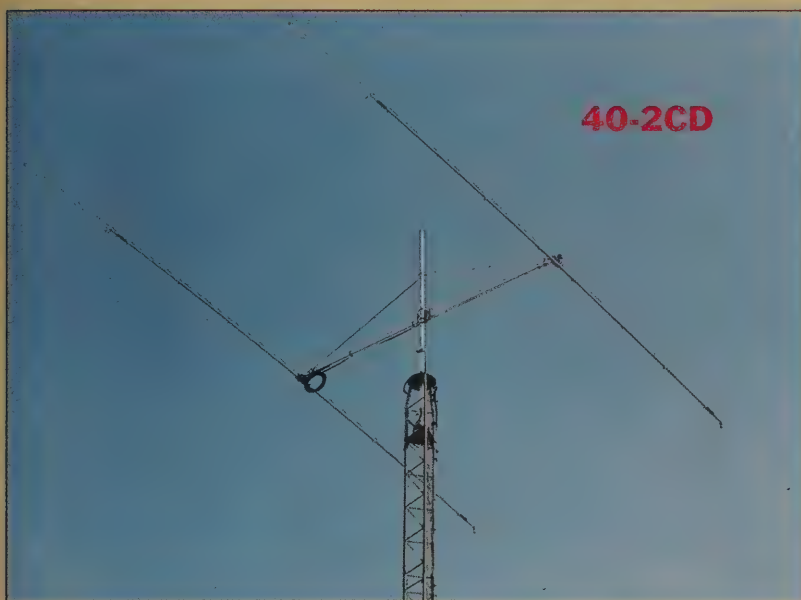


15-4CD



Typical 3 Element Pattern

10, 20, 40 Meters



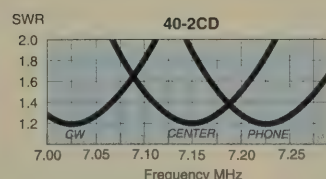
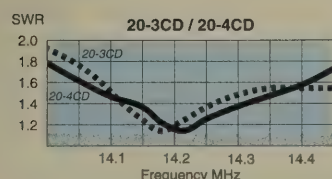
40-2CD



20-4CD



TEN-3



40 Meters

This Skywalker holds the North American contact record for 40 meters. A two element compact antenna, it has the performance that you want for 7 MHz work. The dipole center insulator is heavy duty with a twin terminal 50 Ohm connection. It is by far the most popular two element 40 meter beam!

20 Meters

Our four-element 20 meter Skywalker and its three element compact version will punch your signal through the QRM.

Stainless steel fasteners and double U-bolt brackets ensure that your antenna will last for years.

10 Meters TEN-3

Looking for a lightweight, economical alternative to the 10 meter Skywalkers? Choose the TEN-3. Although its popular with novices and technicians, this antenna is for any ham who wants more gain with a good front to back ratio on 10 meters. This antenna has an 8 foot boom making it easy to install on a very simple mount with only a lightweight rotator. The matching system is our proven Reddi Match for 50 Ohm no balun feed and SO-239 connector. Make more positive contacts with the new TEN-3.

MODEL	40-2CD	TEN-3
Frequency, MHz	7.0-7.3	28-29.7
No. Elements	2	3
Forward Gain, dBd	5.5	8
Front to Back Ratio, dB	20	25
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	200	>1500
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	70	64
Side Lobe Attenuation	>40	>40
Boom Length, ft (m)	23(6.9)	8 (2.44)
Boom Diameter, in (cm)	2.13-1.88(5.4-4.8)	1.38-1.25(3.5-3.2)
Longest Element, ft (m)	43 (12.9)	18 (5.49)
Element Center Dia., in (cm)	1.25 (3.1)	.75 (1.9)
Turning Radius, ft (m)	23.93 (7.29)	9.8 (3.0)
Mast Size Range, in (cm)	1.5-2(3.8-5.1)	1.5-2(3.8-5.1)
Wind Load, ft ² (m ²)	6.38 (.57)	2.0 (.20)
Weight, lb (kg)	44 (19.8)	9.9 (4.45)

MODEL	20-4CD	20-3CD
Frequency, MHz	14.0-14.35	14.0-14.35
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	>400	>300
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	56	57
Side Lobe Attenuation, dB	>40	>40
Boom Length, ft (m)	32 (9.75)	20 (6.1)
Boom Diameter, in (cm)	2.13-1.88(5.4-4.8)	2.0 (5.08)
Longest Element, ft (m)	36.08 (11.00)	35.95(10.96)
Element Center Dia., in (cm)	1.25 (3.1)	1.25 (3.1)
Turning Radius, ft (m)	23.75 (7.2)	20 (6.1)
Mast Size Range, in (cm)	1.5-2(3.8-5.1)	1.5-2(3.8-5.1)
Wind Load, ft ² (m ²)	8.1 (.75)	5.5 (.51)
Weight, lb (kg)	55 (24.95)	30 (13.61)

70 CM, 1 $\frac{1}{4}$, 6 Meters



1-1/4 Meters

We took the features of our 2 meter antennas and incorporated them into a high-gain 1-1/4 meter antenna that is perfect for this fast growing band. You will have more fun with Cushcraft!

6 Meters

Our 617-6B has more gain than any antenna in its class! The serious 6 meter operator will appreciate the features of this great performing Boomer. Find out for yourself.



Two NEW 70 CM Yagis

These new Cushcraft antennas are designed for easy assembly. The elements are mounted atop the boom with stainless traditional hardware. The feed systems employ a UM4N balun enclosed in a UV stabilized housing. The 719B uses a broadband folded dipole while the 729B utilizes a modified T-match.



MODEL	617-6B	220B
Frequency, MHz	50-51	222-223
No. Elements	6	17
Forward Gain, dBd	14.0	17.2
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth MHz	>1	>2
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	2 x 19	2 x 13
H Plane	2 x 20	2 x 14
Side Lobe Atten., dB, E Plane	60	60
Boom Length, ft (m)	34 (10.36)	19 (5.8)
Electrical Wavelength	1.7	4.2
Longest Element, in (cm)	117 (297.2)	26 (66.2)
Turning Radius, ft (m)	17.7 (5.39)	9 (2.64)
Mast Size Range, in (cm)	1.5-2	1.5-2
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft ² (m ²)	4.8 (.45)	2.6 (.24)
Weight, lb (kg)	26 (11.79)	10.5 (4.77)

719B FM, CW and SSB 15.5 dBd

Looking for an antenna to enhance performance on all modes of the 70 CM band? The 13.5 foot long 719B is the right choice. Mount it vertical for FM or horizontal for CW and Sideband. The 719B joins the 2 meter 13B2 as a classic for improved performance.

729B CW and SSB 17.8 dBd

This is the new leader in performance for 70 CM activity. Assembly is easy. Tuning is even easier with our modified T-matching network. The modified-T allows for increased bandwidth over conventional T-matches. It includes capacitive elements which allow for more adjustment. Teflon® cable is used for power efficiency. The non-drooping boom does not require a support strut. Mount several in an array for increased gain.

MODEL	719B	729B
Frequency, MHz	430-450	430-440
No. Elements	19	29
Forward Gain, dBd	15.5	17.8
Front to Back Ratio, dB	25	25
SWR 1.2:1 Typical		
2:1 Bandwidth MHz	20	>10
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	24	20
H Plane	19	22
Side Lobe Atten., dB, E Plane	60	60
Boom Length, ft (m)	13.5 (4.1)	22.17 (6.75)
Electrical Wavelength	6	9.8
Longest Element, in (cm)	13.75 (34.9)	13.75 (34.9)
Turning Radius, ft (m)	7.25 (2.2)	12.5 (3.8)
Mast Size Range, in (cm)	1.25-2	1.25-2
	(3.2-5.1)	(3.2-5.1)
Wind Load, ft ² (m ²)	1.2 (.11)	2.2 (.21)
Weight, lb (kg)	5.6 (2.55)	8.6 (3.9)

70 CM, 1 $\frac{1}{4}$, 6 Meters



1-1/4 Meters

We took the features of our 2 meter antennas and incorporated them into a high-gain 1-1/4 meter antenna that is perfect for this fast growing band. You will have more fun with Cushcraft!

MODEL	220B
Frequency, MHz	222-223
No. Elements	17
Forward Gain, dBd	17.2
Front to Back Ratio, dB	30
SWR 1.2:1 Typical	
2:1 Bandwidth MHz	>2
Power Rating, Watts PEP	2000
3 dB Beamwidth, Degrees	
E Plane	2 x 13
H Plane	2 x 14
Side Lobe Atten., dB, E Plane	60
Boom Length, ft (m)	19 (5.8)
Electrical Wavelength	4.2
Longest Element, in (cm)	26 (66.2)
Turning Radius, ft (m)	9 (2.64)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)
Wind Load, ft ² (m ²)	2.6 (.24)
Weight, lb (kg)	10.5 (4.77)



6 Meters

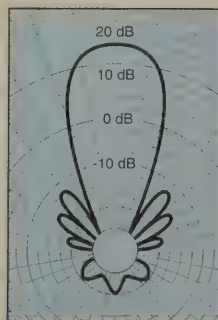
Our 617-6B has more gain than any antenna in its class! The serious 6 meter operator will appreciate the features of this great performing Boomer. Find out for yourself.

70 CM

The contest winner! The 424B will keep you at the top of the charts. Through-the-boom insulated elements, precise spacing, and high efficiency reflector systems are the features that make our 70 cm antennas the right choice for every ham. The 424B has an eye-opening 18.2 dBd forward gain for the ultimate in 70 cm enjoyment.

These boomers are equipped with stainless steel hardware, UV stabilized insulators, teflon® dielectric coaxial balun, seamless heavy-wall booms, and 50 Ohm N connector.

Equip yourself for fun and challenge of 70 cm with a Cushcraft Boomer!



TYPICAL RADIATION PATTERN

MODEL	617-6B	424B
Frequency, MHz	50-51	424-435
No. Elements	6	24
Forward Gain, dBd	14.0	18.2
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth MHz	>1	>12
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	2 x 19	2 x 9.5
H Plane	2 x 20	2 x 11
Side Lobe Atten., dB, E Plane	60	60
Boom Length, ft (m)	34 (10.36)	17.4 (5.3)
Electrical Wavelength	1.7	7.6
Longest Element, in (cm)	117 (297.2)	13 (33.8)
Turning Radius, ft (m)	17.7 (5.39)	10 (3.05)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)
Wind Load, ft ² (m ²)	4.8 (.45)	2.3 (.21)
Weight, lb (kg)	26 (11.79)	4.5 (2.05)

13B2 - 13 Element Wideband

Boomer evolution continues with the 13B2. This new design is lighter weight, lower profile and has more gain and a cleaner pattern. New technicians and experienced hams will enjoy 15.8 dBd gain on FM, packet, CW, or sideband. 13B2 is easily mounted vertically for greatest FM distance and enjoyment. Its optimum boom length makes it a popular antenna that fits almost anywhere. The new balanced UltraMatch provides a 50 Ohm UHF connector for easy feedline attachment. Stronger performance in the 215WB tradition will be yours with the 13B2.

124WB - 4 Element Wideband

This is the right choice for packet systems and other applications requiring a dedicated directional antenna.

All of these antennas give you hot performance with light weight and minimum windload. Stainless steel hardware, solid rod elements and hard drawn aluminum tubing assure you that the antenna will last.

MODEL	124WB	13B2	26B2
Frequency, MHz	144-148	144-148	144-148
No. Elements	4	13	26
Forward Gain, dBd	10.2	15.8	18.8
Front to Back Ratio, dB	19	26	26
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>4	>4	>4
Power Rating, Watts PEP	2000	2000	2000
3dB Beamwidth, Degrees			
E Plane	60	2x18	2x18
H Plane	88	2x19	2x9.5
Side Lobe Attenuation, dB, E Plane	40	>60	>60
Boom Length, ft (m)	4 (1.22)	15 (4.57)	15 (4.57)
Electrical Wavelength	.5	2.2	2.2
Longest Element, in (cm)	40.75 (104)	39.75 (101)	39.75 (101)
Turning Radius, ft (m)	4 (1.22)	8.9 (2.7)	10.4 (3.18)
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)
Wind Load, ft ² (m ²)	.34 (.034)	1.8 (.17)	4.84 (.45)
Weight, lb (kg)	3 (1.36)	6.7 (.31)	21.5 (9.75)

MODEL	224WB	225WB
Frequency, MHz	222-225	222-225
No. Elements	4	15
Forward Gain, dBd	10.2	15.5
Front to Back Ratio, dB	24	24
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>5	>5
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	60	2x17
H Plane	88	2x19
Side Lobe Attenuation, dB E Plane	40	60
Boom Length, ft (m)	3 (.91)	10 (3.05)
Electrical Wavelength	0.5	2.2
Longest Element, in (cm)	26.7 (68)	26.3 (67)
Turning Radius, ft (m)	3 (.91)	5.8 (1.78)
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)	1.25-2 (3.2-5.1)
Wind Load, ft ² (m ²)	.23 (.021)	.95 (.09)
Weight, lb (kg)	1.7 (.77)	5.25 (2.4)

13B2



124WB



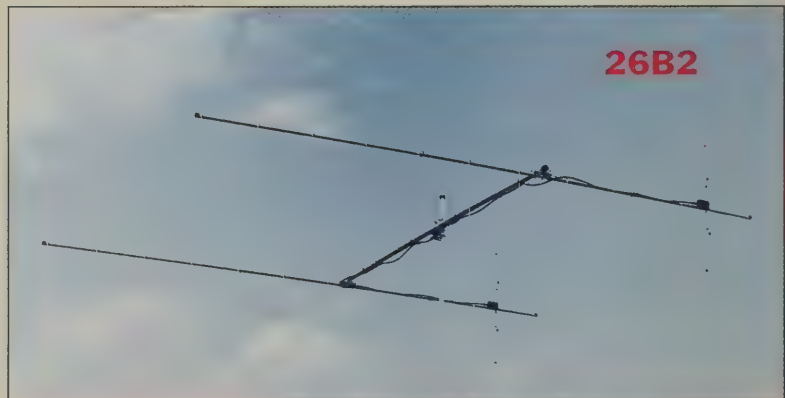
224WB/225WB - 220 MHz Widebands

Perfect for the novice phone band and other 220 MHz operation.

26B2 - 26 Element Wideband

This antenna offers the highest gain of any 2 meter FM antenna in the world. Select the 26B2 when you need to work repeaters or simplex over extreme distances.

26B2



70 CM, 2 Meters

Cushcraft brings you the leading edge of dual band technology with new 70cm/2m products - The All-American Dual Bander, a high performance fiberglass base antenna, the long range AR-270B and the CS-270M mobile mag-mount. These great products will complement our already proven AR-270 dual band compact base antenna.

AR-270B DUAL BAND



AR-270B 5.5/7.5 dB Dual Band Ringo

This all new model gives very high gain with a low angle of radiation and it is only 7.7 feet (2.35 m) high. The AR-270B is computer optimized with two 5/8 wavelength collinear elements on 2 meters and four 5/8 wavelength elements on 70 cm. It is broadbanded for minimum SWR on both bands. It is easy to assemble with three rugged aluminum tubing sections, a durable mast mount and factory sealed coils for best performance.

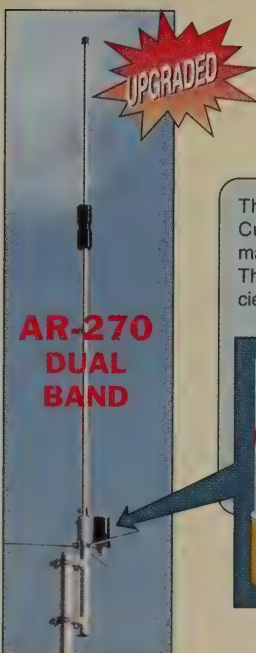
MODEL	AR-270		AR-270B	
Frequency, MHz	144-148	430-450	144-148	430-450
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	>4	>15	>4	>15
Gain, dB	3.7	5.5	5.5	7.5
Power, Watts FM	250	250	250	250
Horizontal Radiation				
Pattern, Degrees	360	360	360	360
Height, ft, (m)	3.75 (1.13)		7.7 (2.3)	
Mast Size Range, in	1.25-2 (3.2-5.1)		1.25-2 (3.2-5.1)	
Radial Length, in (cm)	6.75 (17.1)		20 (51)	
Wind Load, ft2 (m2)	0.27 (0.03)		0.47 (0.044)	
Weight, lb (kg)	2 (0.9)		2.4 (1.09)	

Experience the performance and appearance advantages of all-aluminum dual band antennas. Both models incorporate Ringo Ranger technology in lightweight and durable designs with stainless steel hardware. Their weather-sealed phasing coils and base matching networks eliminate stray RF currents while providing a very low angle of radiation. A simple 50 Ohm cable connection is all you need to experience the full performance of your dual band 2m/70cm transceiver.

AR-270 3.7 / 5.5 dB Dual Band Ringo

The "Dual Wonder" AR-270 is only 3.75 feet (1.1 meters) high. It has great performance for its size, making it the most popular 2m/70 cm base antenna.

Mount it anywhere from table top to roof top. You'll enjoy the performance.



AR-270 DUAL BAND

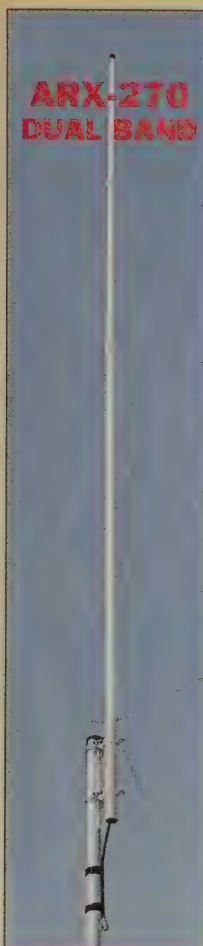
The matching network coils for all Cushcraft dual band antennas are made from a very tough copper alloy. They're silver plated for greatest efficiency. The entire matching network is built on a PC board that surrounds the coil assuring that the antenna will not detune and will operate at peak efficiency for many years.



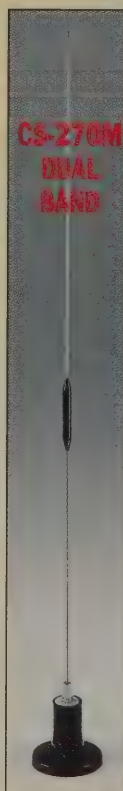
All-American Dual Band Ringo

Cushcraft's new ARX-270 high performance fiberglass base antenna yields a gain of 9 dB on VHF and 12 dB on UHF. Our exclusive non-metallic UV stabilized couplings result in the cleanest pattern of any dual band antenna. The radome is bright white, thick-wall fiberglass that will survive 90 mph winds. The three section design allows easy assembly and is U.P.S. shippable. Our sleek extruded base clamps eliminate vibration and they look great. Professional features like the factory installed pigtail feed and choice of UHF or N connector makes weather-proof connections easy. These technical innovations put the ARX-270 miles ahead. The All-American Dual Bander comes factory tuned and does not require any adjustments. The ultimate in dual-band FM enjoyment can be yours with the ARX-270.

- ARX-270U with UHF connector
- ARX-270N with N-connector



CS-270M DUAL BAND



MODEL	ARX-270U/N	
Frequency, MHz	144-148	430-450
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>4	>20
Gain, dB	9	12
Power Rating, Watts FM	200	200
Horizontal Radiation		
Pattern, Degrees	360	360
Height, ft, (m)	16.5 (5)	
Mast Size Range, in	1.25-2 (3.2-5.1)	
Radial Length, in (cm)	20.5 (52.1)	
Wind Load, ft2 (m2)	0.95 (0.088)	
Weight, lb (kg)	5 (2.3)	

NEW CS-270M 70 CM/2 M Mobile

The CS-270M offers the most gain possible in its compact size. It has 6 dB on 440 and 3.7 dB on 2 meters all in a 36-1/2" tall design. The small coil is insert molded into the center of the radiator. No moisture can penetrate the coil with this technique. The magnetic mount features a clinging 90 pound pull and a roof-protecting rubber pad. The feed line is double shielded Teflon® UltraLink Cable.™ Its low-loss, high temperature and designed to last. The CS-270M has all of the features you will need in a dual-band mobile antenna.

70 CM, 1 $\frac{1}{4}$, 2 Meters



Our Ringos are Number One.

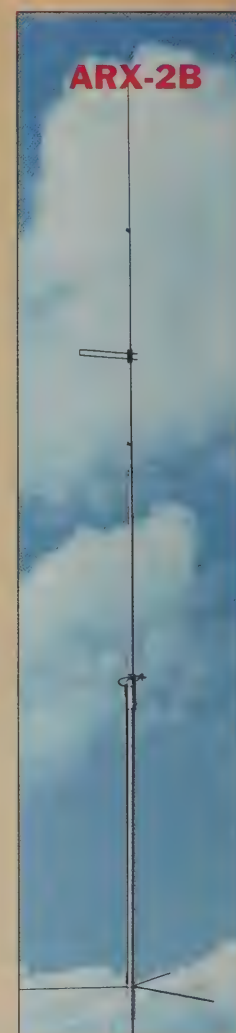
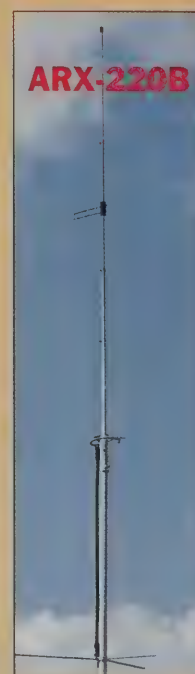
Tough performers at a good price! The Ringo family of dependable, cost-effective antennas has served more hams - from novice to veteran extra - than any other amateur antenna made. Simple, straightforward design, light weight and quick, easy installation make the durable Ringo family right for you. Ringo's top performance and low cost mean more dB per dollar - an equation anyone can appreciate.

Ringo Ranger II

Our Ringo Ranger II has more gain, less windload, and more mechanical integrity than other two meter antennas. You'll quickly appreciate the benefits of this amazing antenna! Based on the original W1BX Ringo, the Ringo Ranger II is the latest design featuring three 5/8 wave radiating elements and an adjustable 1/8 wave phasing stub. The result is a very low angle of radiation over your coverage area.

The Ringo Ranger II has built-in lightning protection, UV-stabilized insulators, heavy wall tubing, improved decoupling radials to eliminate feedline radiation, and all-weather performance. The ARX-450BN has all the features of the standard antenna plus N-connector.

MODEL	ARX-2B	ARX-220B	ARX-450B
Frequency, MHz	135-160	222-225	435-450
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	>5	>10
Gain, dB	7.0	7.0	7.0
Power Rating, Watts FM	1000	500	500
Radiation Angle, Deg.	7	7	7
Horizontal Radiation			
Pattern, Degrees	360	360	360
Ring Diameter, in (cm)	5 (12.7)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in (cm)	.75 (1.9)	.75 (1.9)	.50 (1.2)
Height, ft. (m)	14 (4.3)	9.3 (2.8)	4.9 (1.5)
Mast Size Range, in (cm)	1.0-1.25 (2.54-3.1)	1.0-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Radial Length, in (cm)	20.5 (52.1)	13.75 (33.7)	6.75 (17.1)
Wind Load, ft ² (m ²)	0.5 (0.05)	0.3 (0.03)	0.2 (0.02)
Weight, lb (kg)	6 (2.7)	5 (2.3)	1 (.45)



Some hams comment on the ARX-2B:

"Since I put this antenna up I have received many compliments on the improvement of my signal." (N3LHP)

"The only antenna I ever installed that worked like it should the first time." (N7PGH)

"ARX-2B is a good antenna for my use on 2 meters FM...Several on the air in my area." (N9OPL)

"ARX-2B...the best antenna." (XE2CLB)



A270-10S and A270-6S 10 and 7.8 dB Dual Band Yagis

Increase your range by selecting one of the new Cushcraft dual band Yagis on 2 meters and 70 cm. You can point the antenna at stations while you are in QSO with them. This will direct more of your output power when transmitting at the same time reducing interference and increasing signal strength when receiving. These antennas are perfect for packet applications. Assembly is a snap with our

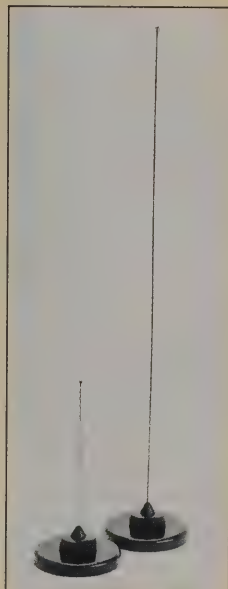
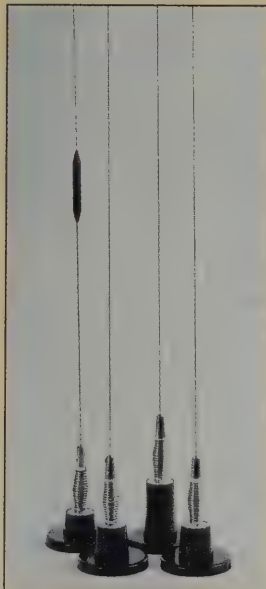
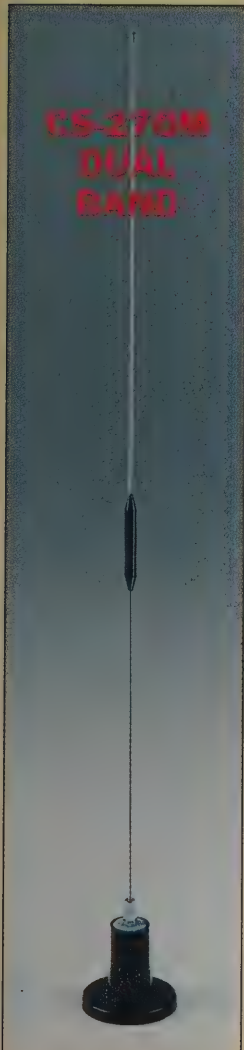
MODEL	A270-10S		A270-6S	
Frequency, MHz	144-148	430-450	144-148	430-450
No. Elements	5	5	3	3
Forward Gain, dBd	10	10	7.8	7.8
Front to Back Ratio, dB	20	18	20	18
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	≥4	≥10	≥4	≥20
Power Rating, Watts PEP	350	350	350	350
3dB Beamwidth, Degrees				
E Plane	52	52	66	66
H Plane	60	60	108	108
Boom Length, ft (m)	6.17 (1.9)		2.8 (.85)	
Longest Element, in (cm)	40.3 (102.4)		41 (104.1)	
Turning Radius, ft (m)	6 (1.8)		2.8 (.85)	
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)		1.25-2 (3.2-5.1)	
Wind Load, ft ² (m ²)	.725 (.07)		.3 (.02)	
Weight, lb (kg)	1.8 (.81)		1.7 (.8)	

fully illustrated assembly manuals. The A270-10S has nearly twice the performance of the A270-6S. Select the antenna for your station depending on the distance of your contacts.

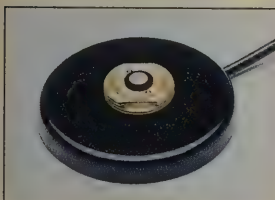
70 CM, 1 1/4, 2, 6, 10 Meters

Cushcraft/Signals mobiles offer the high performance that you need for consistent and mobile communications such as commuting and public service activities. These antennas are the choice of hams and communications professionals around the world who demand high quality, premium products.

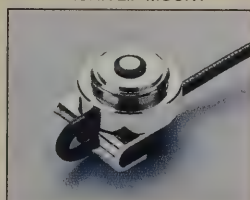
SEE YOUR LOCAL DEALER'S CUSHCRAFT MOBILE DISPLAY



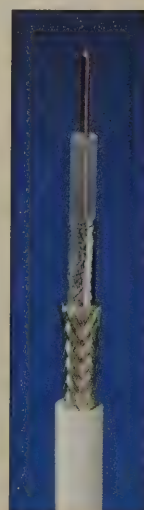
BLACK MAG MOUNT



TRUNK LIP MOUNT



UltraLink Cable™



UltraLink™ Cable

Cushcraft UltraLink cable was designed specifically for high efficiency commercial mobile applications to 900 MHz. UltraLink's RG-58 size allows easy installation through the tightest openings, while its Teflon® dielectric provides the highest temperature tolerance to handle vehicle hot-spots that would melt other dielectric materials. Additional 100% shielding is provided by a jacket of easy-peel foil. All this is covered by 97% braid for easy, secure connector attachment. More of your signal will get through with UltraLink than with any other mobile cable.

CS28M Ten Meter Mag-Mount

Work a new country while you wait for the light to change. Introduced just last year, the CS28M ten meter mag-mount has become a constant companion to today's popular 10 meter multimode mobile rigs. The CS28M comes complete, ready to go with a 49" stainless steel whip and spring and a Euro-Style black poly-coated 90 pound pull magnet. A heavy rubber pad protects your car's finish; twelve feet of Cushcraft's own UltraLink™ low-loss cable (specifically designed for commercial mobile applications to 900 MHz) and PL-259 connector are included with the CS-28M.

Gain and Quarterwave Mobile Antennas

Cushcraft's years of commercial and amateur experience apply cutting-edge designs to consistently high quality materials to produce the best mobile antennas you can buy.

All inductors (and even the coil contacts) are silver plated for better RF conductivity, and all Cushcraft mobile hardware is brass to prevent the seizing inherent with inferior, dissimilar-metal joints. All Cushcraft mobile coil housings are ABS, impervious to temperature changes and ultraviolet radiation. Brass base threads, ultrasonically welded into coil housings, eliminate premature failures associated with inferior fastening techniques, and Cushcraft insert-molded 440 MHz phasing coils assure weather-tight integrity. Only Cushcraft mobile antenna mounts are entirely 50 Ohms, eliminating lossy "VSWR bumps" common in many well known designs. Cushcraft quarter-wave models (CS1147 and CS1450) are broadband, require no tuning and include UltraLink™ low loss cable.

Magnetic Mounts

Cushcraft mag-mounts stay where you put them. Our 90 pound pull magnets are the strongest you'll find. Euro-style black poly finish protects against rust, and a tough rubber pad gives maximum protection to your vehicle's finish. Ultra-Link™ cable on all Cushcraft mobile antennas means more of your signal reaches your antenna every time you key the mike.

NEW CS-270M Dual-Band Mobile

See page 10 for a full description of this new 70cm/2 meter mag-mount mobile.

Model No.	Frequency MHz	Whip Length in	Whip Length m	Description
CS-270M	144-148/440-450	34	.86	Magnetic
CS-270A	144-148/440-450	34	.86	Coil & Whip
CS-147M	144-174	49	1.25	Magnetic
CS-147T	144-174	49	1.25	Trunk Lip
CS-147	144-174	49	1.25	3/4" Hole
CS-147A	144-174	49	1.25	Coil & Whip
CS-1147M	144-148	20	.5	Magnetic
CS-220M	222-225	33	.84	Magnetic
CS-220T	222-225	33	.84	Trunk Lip
CS-220	222-225	33	.84	3/4" Hole
CS-450M	435-470	29.5	.75	Magnetic
CS-450T	435-470	29.5	.75	Trunk Lip
CS-450	435-470	29.5	.75	3/4" Hole
CS-1450M	430-450	7	.17	Magnetic
CS-50M	46-54	49	1.25	Magnetic
CS-50T	46-54	49	1.25	Trunk Lip
CS-50	46-54	49	1.25	3/4" Hole
CS-28M	28-30	49	1.25	Magnetic

70 CM, 1 1/4, 2, 6, 10 Meters



Ringo Ranger

NEW ARX-6

The ARX-6 was developed to meet the needs of serious 6 meter FM hams. It has twice the gain of the standard AR-6. If your operating style requires the most gain and wide-area coverage from a repeater or home station, the ARX-6 is made for you.

ARX-2

This is the 2 meter antenna that combines good gain with compact size. If space does not allow extra height or decoupling radials, the ARX-2 will do the job.

MODEL	ARX-6	ARX-2
Frequency, MHz	50-54	135-160
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>4	>6
Gain, dB	5.5	5.5
Pwr Rating, Watts FM	1000	1000
Radiation Angle, Deg.	360	360
Horizontal Radiation		
Pattern, Degrees	360	360
Ring Diameter, in (cm)	13 (33)	5 (12.7)
Base Dia, in (cm)	2 (5.1)	1.5 (3.8)
Height, ft, (m)	24 (7.3)	9.3 (2.8)
Mast Range, in (cm)	1.5-1.75 (3.8-4.4)	1-1.25 (2.54-3.2)
Wind Load, ft ² (m ²)	1.9 (.18)	.33 (.03)
Weight, lb (kg)	7.5 (3.4)	4 (1.8)

Ringo

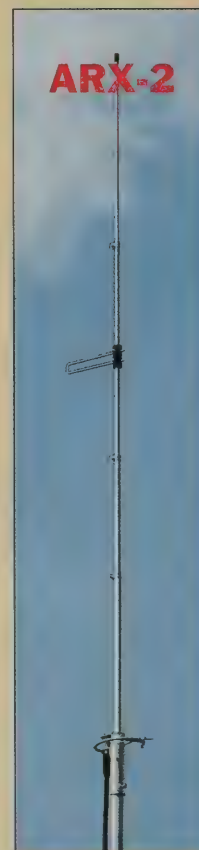
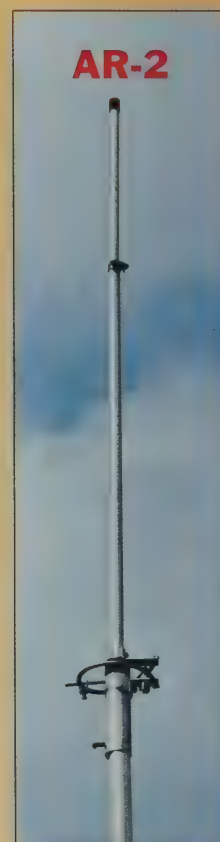
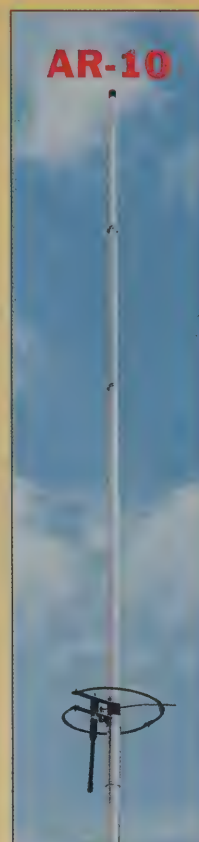
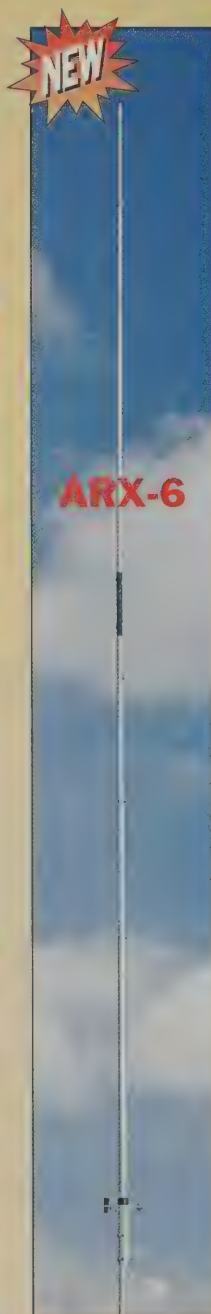
These are the original W1BX FM Ringos. If you want a combination of compact size, wide bandwidth, a low radiation angle, these economical antennas are just for you. Since radials are not needed, you can even use our Ringos indoors. Our Ringos are 1/2 wave and include built-in lightning protection. Put up one of these easily installed antennas and start enjoying FM!

MODEL	AR-2	AR-6	AR-10	AR-220	AR-450
Frequency, MHz	135-160	50-54	28-29.7	222-225	440-460
SWR 1.2:1 Typical					
2:1 Bandwidth, MHz	10	2	>1.5	10	20
Gain, dB	3.75	3.75	3.75	3.75	3.75
Power Rating, Watts FM	1000	1000	1000	500	500
Radiation Angle, Deg.	16	16	16	16	16
Horizontal Radiation					
Pattern, Degrees	360	360	360	360	360
Ring Diameter, in (cm)	5 (12.7)	13 (33)	13 (33)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in (cm)	.75 (1.9)	1 (2.5)	1 (2.5)	.75 (1.9)	.5 (1.3)
Height, ft, (m)	3.9 (1.2)	10.1 (3.1)	17.6 (5.36)	2.6 (.78)	1.4 (.43)
Mast Size Range, in (cm)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Wind Load, ft ² (m ²)	.21 (.02)	.37 (.03)	1.68 (.16)	.21 (.02)	.1 (.01)
Weight, lb (kg)	1.5 (.68)	2.5 (1.1)	4 (1.8)	1.2 (.55)	1 (.45)

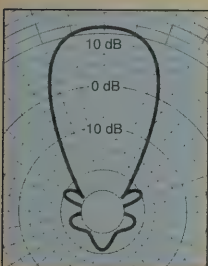
Four Pole Arrays

Cushcraft's four 1/2 wave dipole array is perfect for your repeater or as a powerful base antenna. Strong through-the-boom dipole mounting ensures long life and superior electrical characteristics. The dipoles mount to your tower's legs or on a separate support mast (not included). They can be arranged for omni or elliptical patterns.

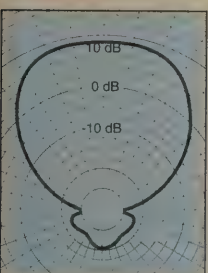
MODEL	AFM-4DA	AFM-24DA	AFM-44DA
Frequency, MHz	144-148	222-225	435-450
Gain, dBd	9 Offset 6 Omni	9 Offset 6 Omni	9 Offset 6 Omni
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>4	>5	>15
Power Rating, Watts FM	500	500	250
Radiation Angle Degrees	6	6	6
Horizontal Radiation			
Pattern, Degrees	360-Variable	360-Variable	360-Variable
Height, ft (m)	23 (7.0)	15 (4.5)	8 (2.4)
Mast Size Range, in (cm)	1.5-2.0 (3.8-5.1)	1.5-2.0 (3.8-5.1)	1.25-2.0 (3.2-5.1)
Wind Load, ft ² (m ²)	2.54 (.24)	1.85 (.17)	1.13 (.11)
Weight, lb (kg)	7 (3.2)	6 (2.7)	5 (2.3)



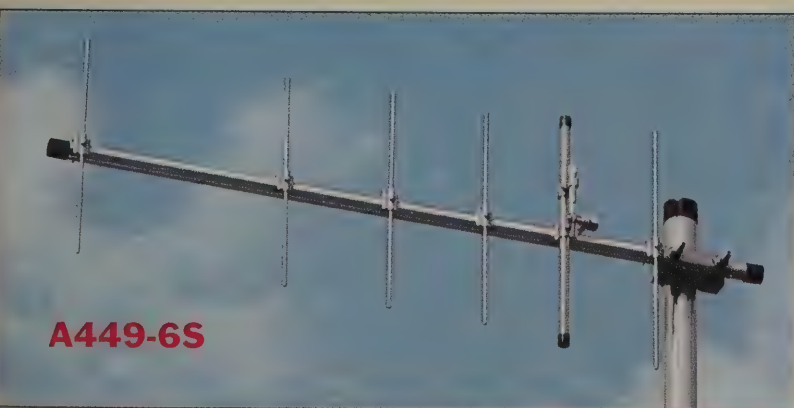
70 CM, 2 Meters



A148-10S



A148-3S



Performance and Value Leaders

A148-10S and A148-3S are the newest computer optimized models of our 2 meter Yagis. We have improved both the pattern and gain of these antennas to give you better FM coverage. They have direct 50 Ohm Reddi-Match with SO239 connector and stainless steel hardware.

A148-3S is the low priced quality leader for Packet, FM or even portable use. It is easily rear mounted.

A148-10S is one of our best value designs with excellent gain and front-to-back ratio. Use it for long range FM or full band 2 meter operation.

For even higher gain the all new A148-20S is a complete antenna array with two ten element Yagis, stacking frame, harness and stainless steel hardware.

Model	A148-3S	A148-10S	A148-20S
Frequency, MHz	144-148	144-148	144-148
No. Elements	3	10	20
Forward Gain, dBd	7.8	13.2	16.2
Front to Back Ratio, dB	25	24	24
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>5	≥4	≥4
Power Rating, Watts PEP	1000	1000	1000
3dB Beamwidth, Degrees			
E Plane	66	40	20
H Plane	108	46	46
Boom Length, ft (meters)	2.8 (.85)	12(3.6)	12 (3.6)
Longest Element, in (cm)	41 (104.1)	40.3 (102.4)	40.3 (102.4)
Turning Radius, ft (m)	2.8 (.8)	6 (1.8)	6.6 (2.0)
Mast Size Range, in (cm)	1.25-2.0 (3.2-5.1)	1.25-2.0 (3.2-5.1)	1.25-2.0 (3.2-5.1)
Wind Load, ft ² (m ²)	0.27 (0.02)	1.21 (0.11)	2.82 (0.26)
Weight, lb (kg)	1.5 (0.7)	6 (2.7)	15 (6.8)

MODEL	A449-6S	A449-11S
Frequency, MHz	440-450	440-450
No. Elements	6	11
Forward Gain, dBd	10.5	13.2
Front to Back Ratio, dB	18	20
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>10	>10
Power Rating, Watts PEP	350	350
3dB Beamwidth, Degrees		
E Plane	60	48
Boom Length, ft (m)	2.9 (0.89)	4.2 (1.35)
Longest Element, in (cm)	13 (33)	13 (33)
Turning Radius, ft (m)	2.9 (.89)	2.8 (.85)
Mast Size Range, in (cm)	1.25-2.0 (3.2-5.1)	1.25-1.5 (3.2-3.8)
Wind Load, ft ² (m ²)	0.30 (0.03)	0.39 (0.04)
Weight, lb (kg)	3 (1.4)	4 (1.8)

Stacking Kits

Our VPK stacking kits for the antennas above are supplied complete with mounting boom, harness, and hardware.

Antenna	Frequency MHz	Complete Kit	Harness Only
A148-3S	144.5-148	A14-VPKS	A14-SK
A148-10S	144.5-148	A148-VPKS	A148-SK
A449-6S	440-450		A449-SK
A449-11S	440-450	A449-VPKS	A449-SK

70 CM, 2 Meters



Reliable satellite communications will be yours with the new Cushcraft OSCAR antennas. The new 22XB two meter and 738XB 70 cm circularly polarized Boomer antennas offer the flexibility you need. Buy them both to create the best station possible or use a single antenna to upgrade an existing installation. Cushcraft provides polarization switches with both antennas. There are no additional options needed. Each antenna includes complete instructions on the mounting and installation of your OSCAR antenna system.

NEW 22XB 2M OSCAR

Stronger signals will link your station with the satellite of your choice. Cushcraft's new 22XB OSCAR Boomer gives you the excellent performance that hams around the world have experienced with the Boomer antenna series. Clean patterns, 14 dBdc gain, superb circularity, and rugged construction are all part of the package. The polarity relay to switch from right to left circular polarization is included. These new designs are resistant to changes brought about by the weather. Construction of the 22XB features all stainless steel hardware. The boom is an extra rugged 1-1/2" diameter 6063-T832 aluminum alloy. Aim your new 22XB at the satellite and you'll be enjoying OSCAR at its best.

NEW 738XB 70 CM OSCAR

Computer aided design and superior engineering are combined to make 738XB the finest 70 CM OSCAR antenna available. The longer boom means more gain. Thirty-eight optimally spaced elements on a rugged 14.3 foot boom mean 15.5 dBdc of gain for your station. Easily overcome the QRM and be on your way to more successful QSO's. Excellent ellipticity means that as the satellite rotates your signals will stay steady. Cushcraft's 738XB features a built-in polarity switcher. All stainless steel hardware, the rugged 6063-T832 aluminum boom, and the weather-sealed polarity switch all add up to the best choice for the serious OSCAR operator. Assemble a winning station by choosing Cushcraft satellite antennas.



MODEL	22XB	738XB
Frequency, MHz	144-148	432-438
No. Elements	22	38
Forward Gain, dBdc	14	15.5
Front to Back Ratio, dB	25	25
Ellipticity dB at boresight	2	2
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	4	6
Power Rating, Watts PEP	600	250
3dB Beamwidth, Degrees		
E Plane	30	24
Boom Length, ft (m)	19.33 (5.9)	14.33 (4.37)
Longest Element, in (cm)	39.19 (99.6)	13.94 (35.4)
Turning Radius, ft (m)	11 (3.35)	8.5 (2.6)
Mast Size Range, in (cm)	1.5-2.0 (3.8-5.0)	1.5-2.0 (3.8-5.0)
Wind Load, ft ² (m ²)	2.6 (.24)	1.4 (.13)
Weight, lb (kg)	11 (5)	7.6 (3.5)
Polarity switch	Included	Included

NEW A148-20T 2 Meter Hi-Lo Cross Yagi

Here's the antenna that solves multi-mode problems! Ten vertically polarized and ten horizontally polarized elements provide 11.1 dBd gain covering 144-148 MHz. The horizontal elements handle your CW and SSB needs, while the vertical elements cover FM. Hardware is stainless steel.

A148-20T has a boom length of 11 ft. (3.4m), longest element length of 40.6 in. (103cm), wind area of 1.21 ft² (.11m²), and a mast size of 1.25-2 in. (3.2-5.1 cm).



70 CM, 2, 6 Meters

A50-6S

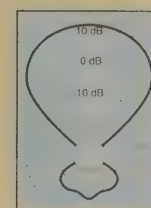
A50-5S

A148-10S

6 Meters

Computer-aided modeling and test range techniques were used by Cushcraft engineers to further optimize the performance of our popular 6 meter Yagis. This process means more gain and cleaner patterns with excellent front-to-back ratios. S-models have very broad bandwidth so they will not detune in bad weather. They feature stainless steel hardware for long trouble-free life. Enjoy the new popularity and exciting contacts on the 6 meter band with one of the S-series Cushcraft Yagis.

MODEL	A50-1S	A50-5S	A50-6S
Frequency, MHz	50-54	50-54	50-54
No. Elements	3	5	6
Forward Gain, dBd	8	10.5	11.6
Front to Back Ratio, dB	20	24	26
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>1	>1	>1
Power Rating, Watts PEP	1000	1000	1000
3dB Beamwidth, Degrees			
E Plane	76	56	48
Boom Length, ft (m)	6 (1.8)	12 (3.7)	20 (6.1)
Longest Element, in (cm)	117 (300)	123 (312)	119 (302)
Turning Radius, ft (m)	6 (1.8)	7.8 (2.37)	11.5 (3.5)
Mast Size Range, in (cm)	1.5-2	1.5-2	1.5-2
	(3.8-5.1)	(3.8-5.1)	(3.8-5.1)
Wind Load, ft ² (m ²)	1.80 (0.17)	2.9 (0.273)	4.46 (.41)
Weight, lb (kg)	7 (3.2)	11 (5.0)	18 (8.2)



A50-6S
RADIATION
PATTERN

70 CM / 2 Meters

A148-10S is the latest generation of our incredible 2 meter Yagis. With its computer optimized design it has outstanding gain and pattern. This antenna is for SSB, CW, tropo or any mode. It has all stainless steel hardware and SO-239 connector. Assembly is quick with easy-to-follow instructions.

For 70 cm, the always popular A430-11S has been re-designed with all stainless steel hardware.

MODEL	A144-7S	A148-10S	A430-11S
Frequency	144-146	144-148	430-435
No. Elements	7	10	11
Forward Gain, dBd	11.1	13.2	13.2
Front to Back Ratio, dB	20	24	20
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	≥4	>10
Power, Watts PEP	1000	1000	350
3dB Beamwidth, Deg.			
E Plane	46	40	38
H Plane		46	
Boom Length, ft (m)	8.2 (2.5)	12 (3.6)	4.7 (1.40)
Longest Element, in (cm)	40 (101.6)	40.3 (102.4)	14 (35.5)
Turning Radius, ft (m)	4.9 (1.5)	6 (1.8)	2.6 (.81)
Mast Size Range, in (cm)	1.5-2	1.25-2.0	1.25-1.5
	(3.8-5.1)	(3.2-5.1)	(3.1-3.8)
Wind Load, ft ² (m ²)	0.81 (0.08)	1.21 (0.11)	0.42 (.04)
Weight, lb (kg)	4 (1.8)	6 (2.7)	3 (1.4)

Fast Acting Gas Discharge Lightning Arresters

Protect your valuable equipment from surges of up to 5,000 amperes with a Cushcraft constant impedance LAC4 arrester! The LAC4 has a replaceable gas discharge tube which clamps voltage surges to less than 50 volts in about 100 nanoseconds—much quicker than the voltage rise time of lightning.

You cannot afford to be without lightning protection. One of the models below is right for your shack.

- LAC4 200 Watt with UHF SO-239 connectors
- LAC4H 2 kW with UHF SO-239 connectors
- LAC4N 200 Watt with N connectors
- LAC4NH 2 kW with N connectors
- LC2 200 Watt replacement cartridge
- LC2KW 2 kW replacement cartridge

Blitz Bug Lightning Arresters

Cushcraft also recommends this well-known series of arresters which are based on a patented three point static discharge design. The Blitz Bug has a sealed air chamber, constant static drain, and controlled voltage discharge.

The Blitz Bug is rated at 2 kw PEP to 500 MHz with negligible insertion loss.

- LAC-1 with UHF PL-259 and SO-239 connectors
- LAC-2 with UHF SO-239 connectors

Power Dividers For Boomers

Our power dividers make it a snap to stack Cushcraft Boomers. Models for 17B2 have N-connectors. They are available for these antennas:

- PD-2 for two 13B2, 124WB
- PD-2N for two 17B2
- PD-4 for four 13B2
- PD-4N for four 17B2
- PD-222 for two 220B, 224WB or 225WB
- PD-224 for four 220B, 224WB or 225WB

Stacking Harnesses For Boomers

For even easier installation of our Boomers, use our installation kits that are complete with harness and power divider. Models for 17B2 have N-connectors.

- 617-SK for two 617-6B's
- 22-SK for two 13B2's
- 22N-SK for two 17B2's



LAC-4H



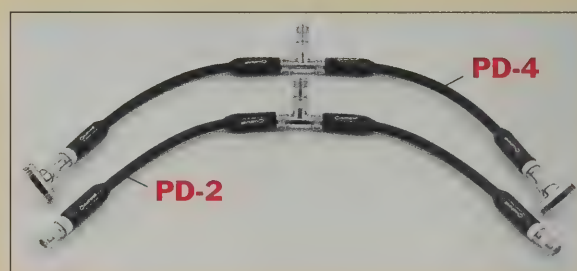
LAC-4N



LAC-1



LAC-2



PD-2

PD-4

One year warranty backed by our 40 years of antenna experience.

Cushcraft antennas are designed to survive 80 mph (129 kph) winds.

For safe antenna installations, avoid contact with powerlines.

The use of lightning arresters is highly recommended.

Stainless steel hardware and high grade seamless 6063-T832 tubing used in all antennas.

Support mast, feedline and RF chokes are not included with antennas.

Specifications are subject to change without notice.

All Cushcraft antennas are available through dealers worldwide.

BOOMER STACKING INFORMATION

Antenna	2x617-6B	2x13B2	4x13B2	2x220B	4x220B	2x424B	4x424B	2x17B2	4x17B2
Forward Gain, dBd	17.0	18.8	21.8	19.8	22.4	20.8	23.4	21.0	24.0
Front/Back Ratio	30	24	24	30	30	30	30	24	24
E-Plane Beamwidth, deg	2x17.5	2x18	2x9	2x13	2x6.5	2x9.5	2x4.8	2x14.5	2x7.3
H-Plane Beamwidth, deg	2x10	2x9.5	2x9.5	2x7	2x5.5	2x5.5		2x7.5	2x7.5
Vert, ft	26	9.2	9.2	8	8	5	5	11.5	11.5
(m)	7.92	2.8	2.8	2.44	2.44	1.97	1.97	3.5	3.5
Horiz, ft	-	-	9.6	-	8.5	-	5.5	-	12
(m)	-	-	3.0	-	2.59	-	2.16	-	3.7
Approximate Wt, lb	62	22	44	23	76	15	55	32.5	115
(kg)	28.12	10.00	20.00	10.40	34.40	7.62	24.95	14.8	52.3

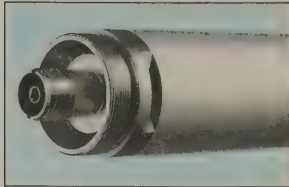
DIAMOND ANTENNAS – THE STANDARD BY WHICH ALL OTHERS ARE JUDGED



ACCLAIMED AS THE TECHNOLOGICAL LEADER IN SINGLE & MULTIBAND ANTENNAS

- WIDE-BAND PERFORMANCE ● FACTORY ADJUSTED/NO TUNING REQUIRED
- HIGHEST GAIN ● UPS SHIPPABLE ● HIGH WIND RATING ● FIBERGLASS RADOME
- DC GROUNDED ● STAINLESS HARDWARE

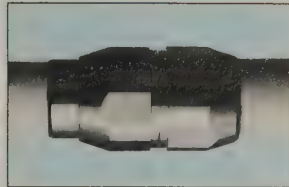
X-500HNA RUGGEDIZED BASE/ REPEATER ANTENNA



COAX CONNECTION
AT BASE END



HEAVY DUTY BASE/
RADIAL ASSEMBLY



STRONG JOINT COUPLINGS

Xseries

MODEL	BAND(MHz)	GAIN(dBd.)	WATTS	CONN.	HT. Ft.	RATED WIND/ MPH
X-50A	144/440	4.5/7.2	200	UHF	5.6	135
X-200A	144/440	6.0/8.0	200	UHF	8.3	112
X-300A	144/440	6.5/9.0	200	UHF	10.2	112
X-510NA*	144/440	8.3/11.7	200	N	17.2	90
X-510MA	144/440	8.3/11.7	200	UHF	17.0	90
X-500HNA	144/440	8.3/11.7	200	N	17.8	90+
X-700HA	144/440	9.3/13.0	200	UHF	24.0	90
X-2200A	144/222	6.0/7.8	150	UHF	11.5	112
X-3200A	144/222/440	6.0/7.8/8.0	100/200	UHF	10.5	112
X-6000A	144/440/1240	6.5/9.0/10.0	100/100/60	N	10.5	112



147MHz



445MHz

RADIATION PATTERNS FOR
X-500HNA/X-510MA/X-510NA

BAND: 144=144 - 148MHz. 222=222 - 225MHz. 420=420 - 430MHz.
430=430 - 440MHz. 440=440 - 450MHz. 1240=1240 - 1300MHz.
* X510NJ :144 - 147 / 430 - 440MHz

X510

GH/F/U&V series

MODEL	BAND(MHz)	GAIN(dBd.)	WATTS	CON N.	HT. Ft.	RATED WIND/ MPH
DP-GH62	50	6.0	200	UHF	21.0	78
F-22A	144	6.7	200	UHF	10.5	112
F-23A	144	7.8	200	UHF	15.0	90
F-142A	222	5.5	200	UHF	6.0	110
F-718A*	440	11.5	250	N	15.0	110
F-1230A	1240	13.5	100	N	10.5	90
U-200A	440/1240	8.3/11.7	100	N	5.9	135
U-300A	440/1240	8.6/13.2	100	N	8.3	110
U-5000A	144/440/1240	4.5/8.3/11.7	100	N	5.9	135
V-2000A	50/144/440	2.1/6.2/8.4	150	UHF	8.3	110

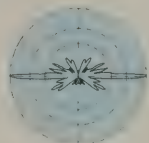
* F-718A:440 - 450MHz, F-718J:430 - 440MHz, F-718L:420 - 430MHz



U-300A 440MHz



F-22



U-300A 1200MHz

F22

U5000

GH62



RF PARTS
SAN MARCOS, CALIF.
(619) 744-0900

DIAMOND'S STATE OF THE ART VHF / UHF MOBILE ANTENNAS—MAXIMUM PERFORMANCE WITHOUT COMPROMISE !!



SG series



SG7200NMO SG7500 SG2000 SG7900

NR series



NR72BNMO NR73BNMO NR770R NR770H

CR series



CR214S CR320A

NEW!
IN BLACK

NEW!
IN BLACK

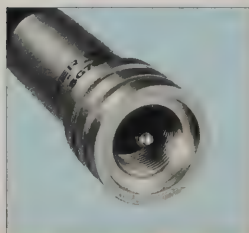
NEW!
IN BLACK

MODEL	BAND	GAIN(dBd)	POWER (w)	MOUNT	HT (IN)	ELEMENT PHASING
NR-72BNMO	2m/70cm	2.15	100	NMO	13.8	1/4 λ , 1/2 λ
NR-73BNMO	2m/70cm	2.15/5.3	100	NMO	33.5	1/2 λ , 2-5/8 λ
NR-770SA	2m/70cm	2.15/2.15	100	UHF	16.9	1/4 λ , 1/2 λ
NR-770HA	2m/70cm	3.0/5.5	200	UHF	40.2	1/2 λ , 2-5/8 λ
NR-770HNMO	2m/70cm	3.0/5.5	200	NMO	38.2	1/2 λ , 2-5/8 λ
NR-770RA	2m/70cm	3.0/5.5	200	UHF	38.6	1/2 λ , 2-5/8 λ
NR-790A	2m/70cm	4.5/7.2	120	UHF	57.5	6/8 λ , 3-5/8 λ
SG-7000	2m/70cm	2.15/3.8	100	UHF	18.5	1/4 λ , 6/8 λ
SG-7200NMO	2m/70cm	3.2/5.7	150	NMO	36.6	1/2 λ , 2-5/8 λ
SG-7500A	2m/70cm	3.5/6.0	150	UHF	40.6	1/2 λ , 2-5/8 λ

MODEL	BAND	GAIN(dBd)	POWER (w)	MOUNT	HT (IN)	ELEMENT PHASING
SG-7900	2m/70cm	5.0/7.6	150	UHF	62.2	7/8 λ , 3-5/8 λ
SG-2000	2m	5.2	150	UHF	62.6	7/8 λ
NR-140A	1-1/4m	3.8	100	UHF	36.2	5/8 λ
NR-124	23cm	8.4	100	N	25	4-5/8 λ
CR-214S	2m/1-1/4m	2.15/3.4	120	UHF	37	1/2 λ , 5/8 λ
CR-224A	2m/1-1/4m	5.0/6.0	150	UHF	68.5	7/8 λ , 2-5/8 λ
CR-320A	2m/1-1/4m/70cm	2.15/3.8/5.5	200/200/100	UHF	37.4	1/4 λ , 1/2 λ , 2-5/8 λ
NR-2000NA	2m/70cm/23cm	3.15/6.3/9.7	100	N	39	1/2 λ , 2-5/8 λ , 5-5/8 λ

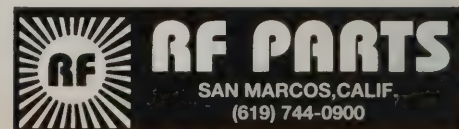
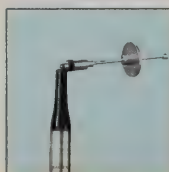
SPECIAL FEATURES

- Factory pre-tuned /no adjustment
- Highest Performance antennas
- SG&NR series do not need grounding
- NMO and UHF (PO) base styles
- New black color models available
- Fold-over feature on most models



FOLD-OVER

PATENTED ONE-TOUCH FOLD-OVER FEATURE



PREMIUM GRADE ANTENNA MOUNTS BY DIAMOND

DESIGNED FOR TODAY'S HIGH PERFORMANCE ANTENNAS



Super Gainer series folding type gutter mount

K300M(Coaxial cable :
RG188A/U·5DSFA-3.5m)
UHF jack - UHF plug
K300 Without cable assembly



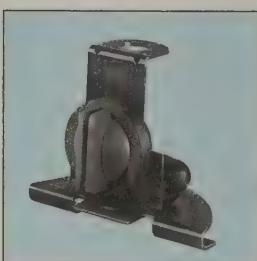
Super Gainer series hatchback door/trunk lid mount

K400M(Coaxial cable:RG188A/U·5DSFA-5m)
UHF jack - UHF plug
K400 Without cable assembly
K400K-3/8M
3/8×24Thd with cable



Variable angle trunk lid mount

(Coaxial cable:RG188A/U·5DFV-5m)
K600M UHF jack - UHF plug
K600N N jack - N plug
K600P UHF jack - N plug



NNR series hatchback door/trunk lid mount

K200 Without cable assembly



Teflon coaxial cable for mobile

FE5M(Coaxial cable:RG188A/U·5DFV-5m) UHF jack - UHF plug



Strong magnet antenna base

DP-SPM / 58U(Coaxial cable :
RG58A/U-4m) UHF jack - UHF plug
DP-SPM / 5D(Coaxial cable :
5D2V-4m) UHF jack - UHF plug
DPK-5NM(Coaxial cable:
5D2V-4m) N jack - N plug
DPK-4NM-M(Coaxial cable:
3.5DQEFV-4m) UHF jack - N plug
Max.Ant.ht.48"



Super Gainer series folding type carrier/mirror mount

K540 Without cable assembly



DIAMOND ANTENNA BASES

GLP-5D UHF base connector 5D & 8X cable

GLP-58 UHF base for RG-58/U cable

GLP-5N N type base 5D & 8X

DUPLXERS AND TRIPLEXERS FOR COMBINING AND SPLITTING VHF/ UHF FREQUENCIES

- Lowest loss
- Maximum Band Isolation
- Low VSWR



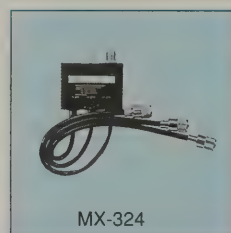
MX-72D/DN



MX-72H/N



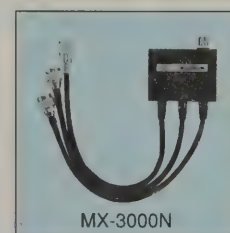
MX-214



MX-324



MX-3000D/DN



MX-3000N

MODEL	MX-37N	MX-72D	MX-72DN	MX-72H	MX-72N	MX-214	MX-324			MX-2000			MX-3000	MX-3000N	MX-3000D	MX-3000DN
FREQBAND MHz	1.6-470 900-1300	LPF		HPF		140-150 220-225	LPF	BPF	HPF	LPF	BPF	HPF	LPF	BPF		HPF
		1.6-30	140-150	400-460			1.5-150	220-225	400-550	1.6-60	110-170	300-950	1.6-160	350-500		850-1300
POWER CW WATTS P.E.P	100/50 200/100	400 1000	150 400	100 250		150/100 300/200	800	600	500	800	800	500	400 800	200 400		100 200
THRU LOSS/dB	0.25/0.45	0.15	0.15	0.25		0.3/0.4	0.3	0.4	0.4	0.15	0.2	0.25	0.2	0.3		0.4
ISOL	45dB	60dB				45dB	40-50dB			60dB			55dB			
VSWR	1.2 :1	1.2 :1				1.2:1	1.2:1			1.2 :1			1.2 :1			
CONNECTOR COMPLEMENT	<div><div>(N)</div><div>MIX</div><div>430 1200</div><div><div>(N)</div><div>(N)</div></div></div>	<div><div>(M)</div><div>MIX</div><div>144 430</div><div><div>(M)</div><div>(M)</div></div></div>	<div><div>(M)</div><div>MIX</div><div>144 430</div><div><div>(M)</div><div>(N)</div></div></div>	<div><div>(M)</div><div>MIX</div><div>144 430</div><div><div>(M)</div><div>(M)</div></div></div>	<div><div>(M)</div><div>MIX</div><div>144 430</div><div><div>(M)</div><div>(N)</div></div></div>	<div><div>(M)</div><div>MIX</div><div>144 220</div><div><div>(M)</div><div>(M)</div></div></div>	<div><div>(M)</div><div>MIX</div><div>144 220 430</div><div><div>(M)</div><div>(M)</div><div>(M)</div></div></div>	<div><div>(M)</div><div>MIX</div><div>50 144 430</div><div><div>(M)</div><div>(M)</div><div>(M)</div></div></div>	<div><div>(N)</div><div>MIX</div><div>144 430 1200</div><div><div>(M)</div><div>(M)</div><div>(N)</div></div></div>	<div><div>(N)</div><div>MIX</div><div>144 430 1200</div><div><div>(M)</div><div>(N)</div><div>(N)</div></div></div>	<div><div>(N)</div><div>MIX</div><div>144 430 1200</div><div><div>(M)</div><div>(M)</div><div>(N)</div></div></div>	<div><div>(N)</div><div>MIX</div><div>144 430 1200</div><div><div>(M)</div><div>(N)</div><div>(N)</div></div></div>				
CONN	12" cable w/ connectors	Direct		12" cable w/connectors		12" cable w/connectors							12" cable w/ connectors		Direct connection	

Note: Connectors shown as "M" are low loss equivalent of SO-239 & PL-259.

Connectors shown as "N" are standard Type-N.

GAP ANTENNA PRODUCTS

Antennas for Limited Space • NO TRAPS • All out Efficiency & Performance • GAP gets it all out!

Featuring ...

Center Launch Technology

NO

Traps, Coils Transformers,
Baluns, Resistors or Base Insulators
All Factory Pretuned



For 50 years ... the vertical has not changed—it's a vertical wire, fed at the base and surrounded by a number of ground radial wires. To operate multi-band, traps are placed at appropriate points to electrically shorten the antenna to a 1/4-wave on the various bands. The *big signals* on the band do not come from these verticals, and DX contacts, even with the vertical's well known low angle radiation, do not happen consistently. The vertical is used by those hams with minimal space, finances or with local restrictions. If a new amateur asked what to put up for an antenna, he is told, "put up a dipole". Why? — a conventional vertical, because of its low radiation resistance and high earth losses (even with an extensive radial system), is the *most inefficient* antenna available, and a trapped multi-band version is worse.

Did you know? ... a 26 ft. vertical on 80 meters should be 66 ft. high! The *missing* 40 ft. is replaced by traps. This *short* antenna has a radiation resistance of only 4Ω ... a *virtual resistor*, which when power is applied to it, radiates R.F. But isn't the only resistor in the antenna system, there are more! The most significant resistor is called *earth-loss*, which results from radials and the ground itself. If three radials are used, the earth-loss created is more than 30Ω. We now have an antenna with 4Ω that radiates and 30Ω that warms the ground, a total of 34Ω. If only 4Ω radiates, this means that if 100 watts are fed to this antenna, *only 12 watts* actually radiates. Inserting lossy traps adds 2Ω, and the radiated-power drops from 12 watts to 11 watts. So, traps don't matter as much as the big earth-loss.

Put out a lot of radials? ... If you had 4000 ft. of wire (for 60 radials), and the room to bury them, the earth-loss would drop from 30Ω to 4Ω. But, the radiated power for 100 watts fed, is still only 50 watts (1/2 is still warming the ground!). Now, the multi-band operation upset because a multi-band vertical must have earth-loss to work. That's why a roof-mounted multi-band vertical won't perform well on all bands. A new vertical design was needed to increase the radiation resistance and decrease or eliminate earth-losses.

The GAP antenna, a radically different vertical! ... Technically, earth-loss results from the capacitance of the antenna to ground from above the feed point. You don't find much earth-loss with dipoles, because they are elevated. GAP *elevates* the feed point to increase the radiation resistance closer to 50Ω, resulting in a better match to the feedline, and almost eliminating earth-losses. Comparing a conventional vertical's feed point at ground level vs the GAP feed at 16 ft. (Challenger), shows a reduction in loss from over 30Ω to 5Ω. The GAP design, with an antenna resistance of 50Ω, and an earth-loss of only 5Ω, is not a very lossy antenna. Its efficiency is about **90%**, and compared to the 12% efficiency of a conventional vertical... the improvement is a dramatic **600%**.

NO TRAPS in the GAP! ... Operating as a vertical dipole with no traps, an elevated feed-point, and unique tuner rods, enables the GAP antenna to be more reliable. It has wider bandwidth and better frequency stability, resulting in less tuning and retuning.

Voyager DX-IV

• **Bands:** 160, 80, 40 and 20 meters • **Bandwidth:** Entire band on 80, 40 & 20 meters, 90 kHz on 160 meters • **Power Rating:** Legal limit • **Feedline:** 50Ω (coax) • **Height:** 45 ft. • **Construction:** 2" diameter 6063-T832 aluminum, and all stainless hardware • **Mounting:** Aluminum pivot and guy brackets supplied • **Wind Area:** 7 sq. ft., requires 2 sets of guy ropes total 350 ft. • **Radials:** 3, each 57 ft. long • **Area Required:** 25 ft. x 25 ft. for guys and radials.

Challenger DX-VIII

• **Bands:** 80, 40, 20, 15, 12, 10, 6 and 2 meters • **Bandwidth:** Entire band on 40, 20, 15 and 12 meters, 130 kHz on 80 meters and 1 MHz on 10 meters (No Traps) • **Power Rating:** Legal Limit • **Feedline:** 50Ω (coax) • **Height:** 31.5 ft. • **Weight:** 18 lbs • **Construction:** Aluminum tubing 6063-T832, and high temperature coaxial cable, stainless steel hardware. • **Mounting:** Self-standing ground mount • **Radials:** 3, each 25 ft. long • **Area Required:** 10 ft. x 12 ft.

Eagle DX-VI

• **Bands:** 40, 20, 17, 15, 12, 10 meters • All out efficiency—all out performance! No coils, resistors, ground plane or earth loss. **Bandwidth:** VSWR under 2:1 on all bands with full bandwidth on 40 and 10 meters; can be custom tuned for your favorite part of the band. • **Height:** 21.5 ft. • **Weight:** 11 lbs • **Mounting:** Supplied with mount for pole, mast, tower, or ground mount, **Radials:** 3 rigid counterpoises, each only 8 ft. long.

Titan DX

• **Bands:** 80, 40, 30, 20, 17, 15, 12, 10 meters • **Bandwidth:** VSWR under 2:1 on all bands except 80m (100kHz) • **Height:** 25 ft. • **Weight:** 25 lbs • **Mounting:** Supplied with all hardware except 1-1/4" steel pipe **Counterpoise:** (4) rigid, only 80" long - no ground area required.

Voyager
DX-IV
4 Bands
\$399⁰⁰

Challenger
DX-VIII
8 Bands
\$259⁰⁰

Eagle
DX-VI
6 Bands
\$269⁰⁰

Titan
DX
8 Bands
\$289⁰⁰

For Antenna Performance? The Answer is... **GAP Technology!**

The Tough ...



SPIRIT SERIES

**Low Profile/Broadband
Omni-directional Antennas
for 2m, UHF & 1.2GHz**

Strong! ... providing the highest performance and durability possible. Virtually impervious to wind and weather – the ideal choice for areas with hurricane force winds, hostile environments, or for remote sites.

Standard Features ...

- Gain: 0, 3, 6, 9, 12dBd
- Polarization: Vertical
- VSWR: 1.5:1
- Wind rating: 140 to 160 mph
- Feed lines: Copper
- Radome: White Fiberglass
- Mounting: Aluminum Mast
- Clamps: Galv. Steel, accepts support pipe up to 3 1/4" O.D.
- Lightning: Direct Ground

For 2 Meters ...

Gain 0, 3, or 6dBd models
Bandwidth..... 6 MHz
Power Rating 600 Watts (max.)
Weight 23 lbs.
Wind Load 95 lbs (6db model)
Wind Area 1.4 sq. ft. (6dB model)

For UHF (406-510MHz) ...

Gain 6dBd or 9dBd models
Bandwidth..... 20 MHz
Power Rating 600 Watts (max.)
Weight 13.7 lbs.
Wind Load 92 lbs (6dB model)
Wind Area 1.2 sq. ft. (6dB model)

For 1.2-1.3 GHz ...

Gain 6, 9 or 12 dBd models
Bandwidth..... 80 MHz
Power Rating 300 Watts (max.)
Weight 10 lbs.
Wind Load 50 lbs (6dB model)
Wind Area 1 sq. ft. (6dB model)

▶ HSU-14448 2m unity gain base antenna	\$219.95
▶ HS3-14448 2m 3db base antenna	\$299.95
▶ HD6-14448 2m 6db base antenna	\$629.95
▶ HS6-43050 430-450MHz 6db base antenna.....	\$379.95
▶ HS9-43050 430-450MHz 9db base antenna.....	\$419.95
▶ HS6-12430 1.2GHz 6db base antenna.....	\$319.95
▶ HS9-12430 1.2GHz 9db base antenna.....	\$419.95
▶ HS10-12430 1.2GHz 10db base antenna.....	\$419.95
▶ HS12-12430 1.2GHz 12db base antenna.....	\$529.95

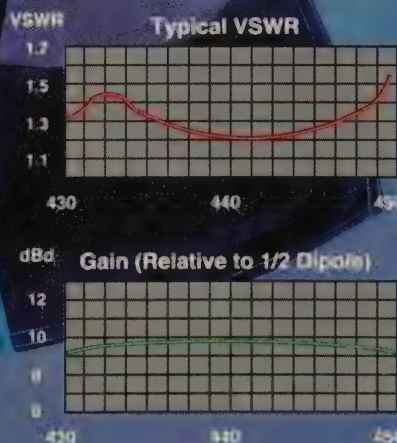
All SPIRIT MODELS are Drop Shipped from the Factory. See pg. 9 under HUSTER for details.

Radiation Pattern
(Relative Field)



Vertical

(0.5 ft. low 1140MHz)



**For Spirit Models
and Pricing –
see HUSTER
in the Price List .**



VHF and UHF Fixed Station Vertical Antenna

Model G6-270R Dual-band Base Antenna for 2 Meter and 440 MHz.

Created from the same design as the G7 and G6 series. Rugged and Solid fiberglass construction. Optimum Gain and Wide Bandwidth. Consists of 5/8 λ over 5/8 λ on 2M and 4 x 5/8 λ on 440 MHz.

- Length: 7ft. 6 in.
- Weight: 5.3 lbs.
- Wind Survival: 100 mph.
- Mounting: 1-1/4" - 1-1/2" mast
- Max Power: 100 watts
- Gain: 6dBd VHF & UHF
- Bandwidth: 1.5:1 SWR
2 MHz - 2 Meters
10 MHz - 440 MHz.
- Feed: Shunt, DC ground
- Connector: N female



Model G6-440 Omnidirectional Fixed Station

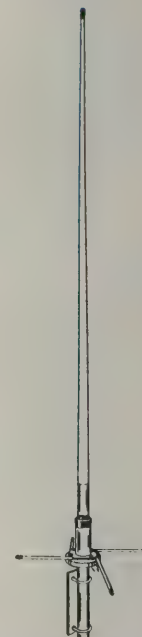
Each is pre-tuned at the factory for easy installation. Enclosed in a lightweight tapered fiberglass radome for low wind resistance. Compact size allows shipment via U.P.S. or Parcel Post.

ELECTRICAL

- Maximum power input: 250 watts
- Gain: 6 dB
- Bandwidth: 8 MHz. under 1.5:1 SWR
- Impedance: 50 ohm nominal
- Lightning protection: direct ground
- Termination: Type N female

MECHANICAL

- Length: 87"
- Weight: 5 lbs.
- Wind survival: 125 mph.
- Mounting: up to 2" mast



G6-144B Two Meter Antenna Omnidirectional Fixed Station

6dB GAIN - compared to 1/2 wave dipole.

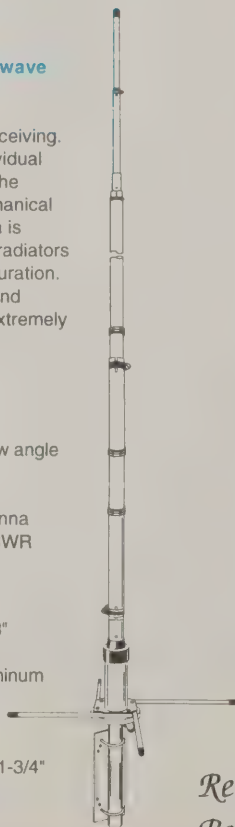
Get the tremendous advantage of 6 dB gain transmitting, 6 dB gain receiving. Whether your application is for individual fixed station or repeater operation the Hustler G6-144B has superior mechanical and electrical design. Optimum gain is achieved with two 5/8 wave-length radiators correctly phased in collinear configuration. Stated gain figure is conservative and maximum signal radiation is at an extremely low angle.

ELECTRICAL

- 6 dB gain over 1/2-wave dipole
- Omnidirectional radiation pattern
- Maximum radiation - extremely low angle
- 50 ohm feed impedance
- Field adjustable: 140-150 MHz.
- SWR at resonance: 1.2:1 at antenna
- Bandwidth: 4 MHz. under 2:1 VSWR
- Shunt-fed with D.C. grounding

MECHANICAL

- Vertical element: 117" long, 1-1/8" telescopic to 3/8"
- Constructed of high strength aluminum
- Connector: SO-239
- Wind load: 26 lbs. @ 100 mph.
- Completely self-supporting
- Mounting: Vertical support up to 1-3/4"
- Shipping wt: 6.8 lbs.



G7-144 Two Meter Antenna Omnidirectional Fixed Station

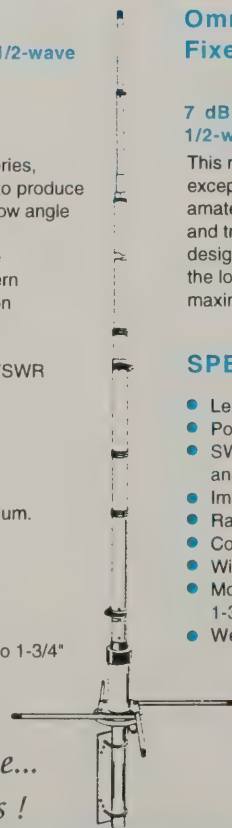
7 dB GAIN - compared to 1/2-wave dipole.

ELECTRICAL

- Radiator: Collinear shunt-fed.
Triple 5/8-wave elements in series, separated by 2 phasing coils to produce maximum gain and extremely low angle of radiation.
- 7 dB gain over 1/2-wave dipole
- Omnidirectional radiation pattern
- Extremely low angle of radiation
- Tuning range: 144-148 MHz.
- VSWR: 1.2:1 at resonance
- Bandwidth: 4 MHz. under 2:1 VSWR
- Power: 600 watts
- 50 ohm feed impedance
- Shunt fed with DC grounding

MECHANICAL

- High strength fiberglass and alum.
- Completely self-supporting
- Length: 184"
- Radials: (4) 20-1/4" x 3/8" O.D.
- Connector: N-type
- Wind load: 26 lbs. @ 100mph.
- Mounting: Vertical support up to 1-3/4"
- Weight: 10 lbs.



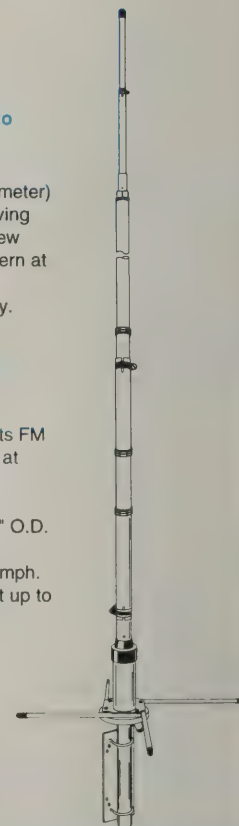
G7-220 Omnidirectional Fixed Station

7 dB GAIN - compared to 1/2-wave dipole.

This rugged antenna means exceptional 220 MHz (1-1/4 meter) amateur performance, receiving and transmitting. A unique new design keeps the signal pattern at the lowest possible angle of maximum radiation efficiency.

SPECIFICATIONS

- Length: 122" long
- Power capability: 600 watts FM
- SWR at resonance: 1.2:1 at antenna
- Impedance: 50 ohms
- Radials: (4) 14-3/4 x 3/16" O.D.
- Connector: Type N
- Wind load: 26 lbs. @ 100 mph.
- Mounting: vertical support up to 1-3/4" O.D.
- Weight: 7 lbs.



*Reliability & Performance...
Beyond your Expectations !*

FX Series

- 3.4 dB gain; 5/8 λ , 200 watt rating
- 15 feet of coax with PL-259 connector
- Magnetic mount holds to 100 mph.

Model FX-2

2 meter, black and chrome

Model FX-220

220 MHz., black and chrome

Model FX-2B

2 meter, all black

Model FX-220B

220 MHz. all black



RX Series

- 3.4 dB Gain; 5/8 λ , 100 watt rating
- 15 foot of coax with PL-259 connector
- Magnetic mount holds to 75 mph.

Model RX-2

2 meter, black and chrome

Model RX-220

220 MHz. black and chrome



Model

BBLT-144A

3.4 dB Gain Trunk-Lip Mount Antenna

- Adjustable 143-149 MHz.
- SWR: 1.1:1 at resonance
- Power rating: 200 watts FM
- Shunt-fed • Reduced static
- Length: 4'4" inc. mt. • Spring and 180° swivel ball for vertical positioning
- 17' coax with connector
- No drilling required



Model

BBL-144A

3.4 dB Gain Roof Mount Antenna

Same as BBLT-144A but mounts in 3/4" hole on a flat surface. 17' coax with connectors.

Model

SF-220

Low Cost 3.4 dB Gain 220 MHz 5/8 λ for 3/8" x 24 thread mounts

- 1.2:1 SWR at resonance
- Power rating: 100 watts FM
- Tapered stainless steel radiator
- Length: 2'7"



Model

SF-2

Low Cost 3.4 dB Gain 2 meter 5/8 λ for 3/8" x 24 thread mounts

- 1.2:1 SWR at resonance
- Power rating: 100 watts FM
- Tapered stainless steel radiator
- Length: 4'



Model

RX-440

UHF Magnetic Mount

- 5/8 λ over 1/4 λ design
- 5 dB gain
- Speed rated to 75 mph.
- Includes 12' coax



Collinear

Model CGT-220

5.2 dB Gain 5/8 λ Over 1/4 λ Collinear Trunk-Lip Mount Antenna

- 1.1:1 SWR (typical) at resonance
- 4 MHz. bandwidth under 1.5:1 SWR
- Power rating: 200 watts FM
- Height: 4' 9" including mount
- Spin knob to remove antenna
- 17' of low loss coax with connector



Model CG-220

Has identical electrical characteristics as CGT-220 but with 3/8 x 24 threaded base for use with standard ball mounts or other 3/8" x 24 Hustler mounts.



Model CGT-144

5.2 dB Gain, 5/8 λ Over 1/4 λ Collinear Trunk-Lip Mount Antenna

- 6 MHz bandwidth
- 1.5:1 SWR
- Power rating: 200 watts FM
- Length: 7' 1" including mount
- 180° swivel ball for vertical positioning
- 17' coax with connector
- No drilling required



Model CG-144

Same as CGT-144 but has 3/8" x 24 threaded base for use with standard ball mounts or other 3/8" x 24 Hustler mounts.

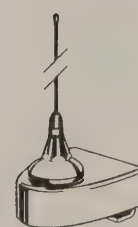


Unity Gain

Model THF

VHF/UHF Trunk-Lip Mount Antenna

Tunable 17-7 PH stainless steel radiator is cut to 1/4 wavelength for low SWR and unity gain from 140 to 500 MHz. Trim chart included. Easy to install trunk-lip mount attaches to rear or side of trunk lid without drilling. Supplied ready for operation with 17' of coax with connectors installed.



Model UGM

Extend range of handheld or portable radios. Trimmable 17-7 PH stainless steel radiator is cut to 1/4 wavelength for low SWR and unity gain from 140 to 500 MHz. Trim chart included. Highly efficient mylar-protected magnetic mount attaches conveniently to magnetic compatible surfaces. No drilling! Supplied ready for operation with 7' of mini-coax with BNC connector.



Model UHT-1

VHF/UHF Roof/Deck Mount Antenna

Low profile mount designed for easy installation in a 3/4" hole on any flat surface or on roof without pulling headliner. Unity gain, 1/4-wave performance. Tunable 17-7 PH stainless steel radiator permits operation on any frequency from 140 to 500 MHz. Trim chart, 15' of coax and connector are included.



Model

MKR-2 Radial Kit

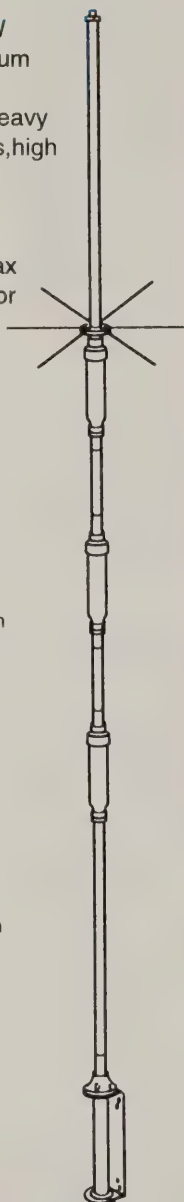
Contains three decoupling radials and mount to convert series-fed mobile VHF antennas to fixed operation. Performance is comparable to many regular base antennas. Suitable for permanent installations or portable use. Heavy-duty zinc plated mast bracket and hardware. Accepts antennas with standard 3/8 x 24 threaded base.

*Reliability & Performance...
Beyond your Expectations!*



Fixed Station Multi-Band HF Vertical Antennas

- Broadbanded - low VSWR at band edges
- Power capability - full legal limit on SSB or CW
- Solid one-inch fiberglass trap forms for optimum electrical and mechanical stability
- Heavy wall, high strength aluminum tubing, heavy duty aluminum mounting bracket and low loss, high strength insulators
- Stainless steel clamps and hardware
- Easy assembly and tuning
- Single line feed with any length of 50 ohm coax
- Use as ground mount with or without radials, or elevated mount with radials



Model 6-BTV

Bands	10-15-20-30-40 & 75 or 80 meters
Length/weight	24'/16.5 lbs.
Mounting	Vertical support up to 1-3/4" O.D.
Wind load	29 lbs. @ 70 mph.
Power capability	Full legal limit SSB/CW
VSWR at resonance	1.15 to 1 or better
Bandwidth	VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. on 75 or 80 meters)

Model 5-BTV

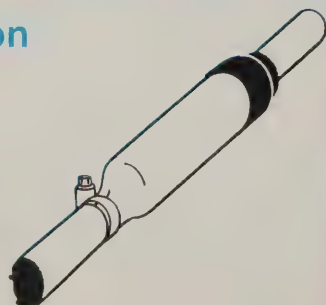
Bands	10-15-20-40 & 75 or 80 meters
Length/weight	25'1"/17 lbs.
Mounting	Vertical support up to 1-3/4" O.D.
Wind load	29 lbs. @ 70 mph.
Power capability	Full legal limit SSB/CW
VSWR at resonance	1.15 to 1 or better
Bandwidth	VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. on 75 or 80 Meters)

Model 4-BTV

Bands	10-15-20-40 meters
Length/weight	21'5"/15 lbs.
Mounting	Vertical support up to 1-3/4" O.D.
Power capability	Full legal limit SSB/CW
VSWR at resonance	1.15 to 1 or better
Bandwidth	VSWR 1.6:1 at band edges

30 Meter Add-on Kit for 4-BTV and 5-BTV

Model 30-MTK
Full 30 meter band coverage
Will not affect normal operation
Easy installation
All hardware included
Weight: 5 lbs.



Hustler Resonators

Standard Resonators

Power rating - 400 watts SSB

Part	Description	Approx. Bandwidth 2:1 SWR or Better
RM-10	10 METER	150-250 KHz.
RM-11	11 METER	150-250 KHz.
RM-12	12 METER	90-120 KHz.
RM-15	15 METER	100-150 KHz.
RM-17	17 METER	150 KHz.
RM-20	20 METER	80-100 KHz.
RM-30	30 METER	50-60 KHz.
RM-40	40 METER	40-50 KHz.
RM-75	75 METER	25-30 KHz.
RM-80	80 METER	25-30 KHz.

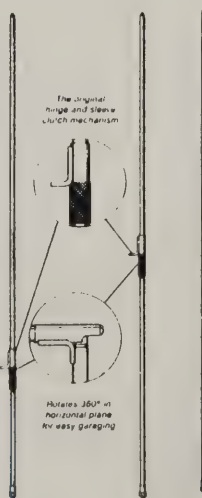
Super Resonators

Power rating - full legal limit. Super Resonators also offer wider bandwidth, especially on 40, 75 and 80 meters.

Part	Description	Approx. Bandwidth 2:1 SWR or Better
RM-10-S	10 METER	250-400 KHz.
RM-11-S	11 METER	250-400 KHz.
RM-15-S	15 METER	150-200 KHz.
RM-20-S	20 METER	100-150 KHz.
RM-40-S	40 METER	50-80 KHz.
RM-75-S	75 METER	50-60 KHz.
RM-80-S	80 METER	50-60 KHz.



Mobile HF Antennas Hustler Masts



MO-1 Mobile mast, 54" high, for deck or fender mounting - folds over 15" above base.

MO-2 Mobile mast, 54" high, for bumper mounting - folds over 27" above base.

MO-3 Mobile mast, 54" high, solid - does not fold over.

MO-4 HF Mobile Mast

- For use with Hustler HF resonators
- Only 22" long
- Suitable for trunk or deck mounting
- Includes 3 new tip rods



MO-4

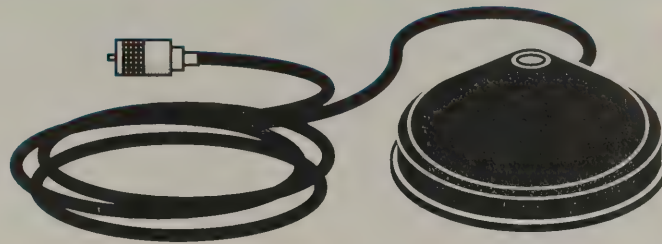
*Reliability & Performance...
Beyond Your Expectations!*



Mobile Antenna Hardware

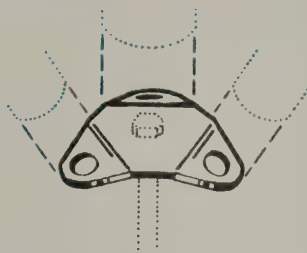
MBM "Super" Magnet

- 95 lb. pull strength
- Powerful 5 inch dia. magnet
- 16 feet RG 58 coax with PL-259 connector
- 3/8" x 24 female threads
- Recommended for antennas up to 48" in length



Multi-band Adapter VP-1

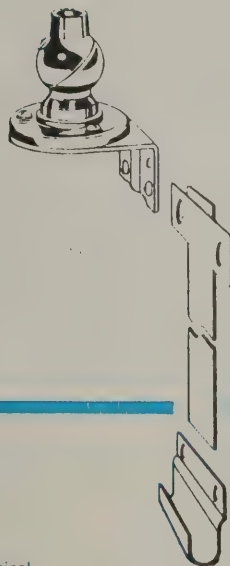
Automatic bandswitching using any three Hustler H.F. mobile resonators. Adapts with any Hustler H.F. mast (MO-1, MO-2, MO-3, MO-4) for tri-band operation easily and quickly.



Bumper Mount BM-1

Design is rugged for supporting Hustler antenna with Standard or Super resonators. Heavy stainless steel strap, stronger than chain, fits most bumpers inconspicuously. Assembly is easily installed and held rigid by "J" bolts at the top and bumper strap clamp at bottom.

Mount includes 180° adjustable swivel ball for vertical positioning of antenna. Hardware is zinc plated for superior resistance against corrosion.



Resonator Spring RSS-2

Finest quality stainless steel spring for use between resonator and Hustler antenna mast. This 3/4" x 3 x 1/2" spring absorbs shock when antenna strikes overhanging obstructions. Supplied ready for easy installation with 3/8" x 24 threads, female on one end, male on the other.



Quick Disconnect QD-2 100% Stainless Steel

Remove antenna from mount in seconds with push and twist release. Every part including the compression spring is manufactured from the best available 100% stainless steel. Special design of enclosed compression and lock assembly assures freedom against ice and dirt jam up. Accommodates small, medium and large size mobile antennas. Equipped with 3/8" x 24 threads, female one end and male on the other.



Stainless Steel Mounts

- Exceptional performance and quality
- 180° adjustable reinforced stainless ball
- Professional quality Cyclopedia bases for greatest mechanical stability
- Exclusive "C" backup plate allows external installation
- Supplied with all mounting hardware and cork pad
- Applicable with all Hustler and other 3/8" x 24 thread antennas

SSM-1 Professional Ball Mount and Spring

SSM-2 Ball Mount

SSM-3 Stainless Steel Spring with Coupling Stud

Professional Series Heavy Chrome

Model C-32

Hustler professional ball mount. Furnished complete with rubber pad, steel backup plate, all mounting hardware, and hex wrench.



Model C-29

Stainless steel, corrosion resistant and electropolished spring complete with 3/8" x 24 coupling stud.



Model C-30

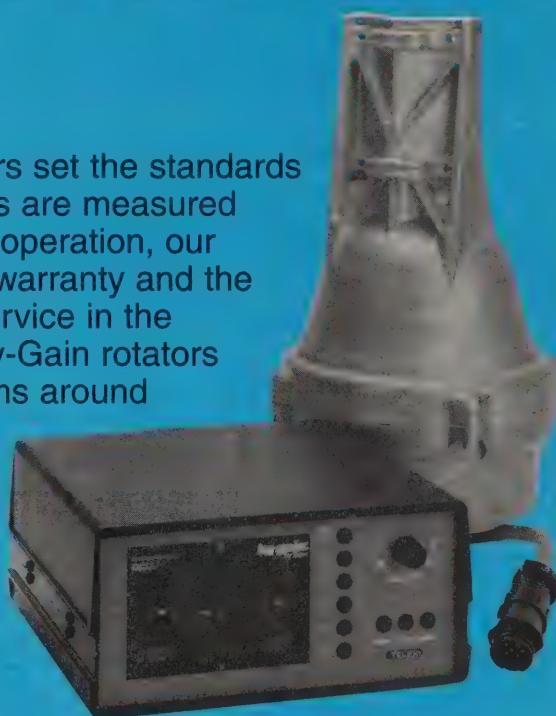
Chrome-plated steel spring complete with 3/8" x 24 coupling stud.



*Reliability & Performance...
Beyond your Expectations!*

HY-GAIN ROTATORS—SETTING THE STANDARD

Hy-Gain rotators set the standards that other rotators are measured against. Reliable operation, our one-year limited warranty and the best customer service in the industry make Hy-Gain rotators the choice of hams around the world. Some others THINK they compare to our rotators, but here are the facts.



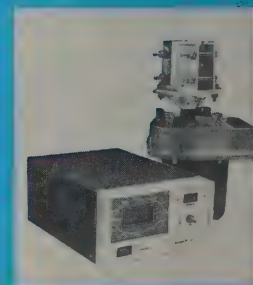
HAM IV For medium-sized antenna arrays with a windload area up to 15 sq. ft. when mounted in a tower or 7.5 sq. ft. when mast mounted with optional lower mast support. Uses 98 ball bearings for easy turning and utilizes electric wedge brake that gives 5000 in. lbs. of brake torque. Mast sizes up to 2 1/16" diameter; lower temperature grease good to minus 30 degrees F. New weatherproof control cable connector eliminates terminal strip. New ring gear has 100,000 PSI tensile strength for maximum reliability.Order HYG 304
Also available with DCU-1 Pathfinder
....Order HYG 304D



T2X Tailtwister For larger antenna arrays with a windload area up to 20 sq. ft. when mounted in-tower or 10 sq. ft. when mast mounted with optional lower support bracket. Uses 138 ball bearings for maximum load capacity and the electric wedge brake provides 9000 in. lbs. of braking torque. New weatherproof control cable connector eliminates terminal strip. New ring gear has 100,000 PSI tensile strength for maximum reliability. 24 pounds
....Order HYG 304
Also available with DCU-1 Pathfinder
....Order HYG 304D



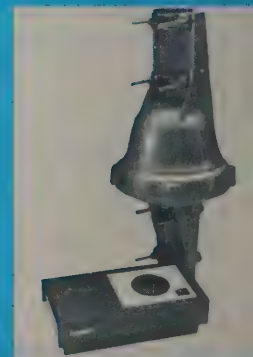
HDR-300A For king-sized arrays up to 25 sq. ft., this new version has many improvements over earlier versions including a new stainless steel output shaft, larger output shaft keyway, ferrite beads on the potentiometer lines and a new control cable connector that eliminates using a screwdriver on the tower. One of the strongest amateur rotators available, it has 7500 in. lbs. of braking torque and a heavy-duty steel mast clamp. 55 poundsOrder HYG 300



CD-45-II • For antennas with up to 8.5 sq. ft. windload area when mounted in-tower; or 5 sq. ft. when mast mounted with supplied lower support bracket. Rotor unit: 17 3/8" h x 8" diameter; 48 ball bearings (two races), disc brake, mast sizes up to 2 1/16" diameter. Illuminated directional indicator, separate snap action brake and rotation switches. Meter face may be reversed for N or S center scale, as desired. Use Belden 8448 8-wire control cable. 20 lbs.



AR-40 • For large TV/FM and smaller Ham Antennas up to 3.0 sq. ft. windload area when mounted in-tower; or 1.5 sq. ft. mast mounted with supplied lower support bracket. Rotor unit: 17 3/8" h x 8" diameter, 12 ball bearings (two races), disc brake, mast sizes up to 2 1/16" diameter. Automatic, silent control box—just dial and touch for desired direction. Use Belden 8448 8-wire control cable. 14 lbs.



US	THEM
The Hy-Gain Ham IV, the best selling ham rotator ever made—over 14,000 installed since 1985	No
Solenoid operated brake wedge	Doesn't have one
Computer compatible	Yes, for an additional \$345.00
Six pre-set beam headings	One
Made in the U.S.A.	Sorry
Stainless Steel U-bolts to hold mast	Aluminum alloy bracket
American nuts and bolts	Metric
Heavy duty materials—ours weighs 20 pounds	A lightweight 15.2 pounds
Direct rotator Customer Service line	Good luck
The best Customer Service and parts availability in the industry	Not even close

hy-gain
by Telex

Your Performance Advantage

Telex Communications®, Inc.
8601 East Cornhusker Highway
Lincoln, NE 68505 USA
Telephone: 402-467-5321
FAX: 402-467-3279



Call Linda
direct at 402-465-7021 for rotator
service, parts or warranty work

HY-GAIN BY TELEX YOUR PERFORMANCE ADVANTAGE

What's important to you when you're planning your new antenna system? Is it durability? Performance? Best antenna for the money? Whatever your criteria, Hy-Gain antenna products have always delivered performance, reliability and value—from 160 meters to satellite communications. Start with our quality designs and high quality materials, add our professional antenna range testing, MIL spec manufacturing and quality assurance, and you can understand why Hy-Gain is the most respected name in amateur antenna products.



TH11DX This unique design gives you the frequency coverage of a log periodic with the performance of a monobander. Covers 20, 17, 15, 12 and 10 meters with maximum performance and only one feedline.



TH3 MK4 Why make compromises when you can have the best? The TH3 MK4 tribander gives you Hy-Gain performance and reliability with a modest price that is less than the Cushcraft A3. Features impressive 5.9 dBd gain and all stainless steel hardware.

V2R — A rugged antenna for 2 meters, the V2R provides 3 dBd gain with a wide coverage pattern. It features two collinear 5/8 wave antennas fed in phase along with 2 sets of radials that decouple the lower radiator from the mast. Tunable from 138-175 MHz with wind survivability to 120 MPH.

V42R — Expand your capabilities with this dual-band performer. This omnidirectional antenna gives you 3 dBd gain on 2 meters as well as 5 dBd gain on 70 cm. Comes complete with type N connector.

hy-gain.
by Telex

OUTbacker

The Complete HF Mobile Antenna System



Whether in the city...



in the country...



or backpack portable.

ONE ANTENNA DOES IT ALL • BUILT TO LAST • WIDE BANDWIDTH • LOW SWR • SHEER MOBILING ENJOYMENT

It's plug-n-play, mate!

OUTBACKER

links your rig to the world.

- **Outbacker Classics** OB8: 6 ft. tall. 80-10m plus WARC's. 300 watts PEP. 3/8-24 thread. Ideal for all applications. OBS8: Same specs. Splits in two sections. Easy to store. OB8TRI: Same specs. Splits in three sections. Backpacker's delight. OB8HP: 500 watt PEP version. OBM: Ham/Marine combo. Popular Ham bands PLUS marine ITU bands.
- **Outbacker Perth** 7.5 ft. tall. 80-10m plus WARC's. 150 watts PEP. 3/8-24 thread. 3.5 ft. stinger retracts into 4 ft. mast for garaging or trunk storage. Superb performance. Perfect for trunk mounting. Low wind resistance.
- **Outbacker Jr.** OBR8: 4 ft. tall. 80-10m plus WARC's. 150 watts PEP. 3/8-24 thread. Terrific for hatchback or roof mounting and RV's.

Call us for details and ask about the OUTBACKER information video.

OUTBACKER MODEL DESCRIPTIONS AND PRICING

Standard models with 8 bands — 75m-40m-30m-20m-17m-15m-12m-10m — All with standard 3/8-24 threads, all models black.

	Description	Model #	Price
OUTBACKER PERTH	Newest OUTBACKER • highest performer • 4 ft. shaft with 3 ft. stinger low wind resistance • 150 watt P.E.P.	Model Perth	\$274.00
OUTBACKER 8	6 ft, 300 watts P.E.P.	Model #OB-8	\$259.00
OUTBACKER HP	6 ft, 500 watts P.E.P.	Model #OB-8HP	\$289.00
OUTBACKER SPLIT	6 ft, 300 watts P.E.P., breaks down into 2-3 ft. sections for easy storage storage pouch included	Model #OB-S8	\$289.00
OUTBACKER TRI-SPLIT	same as OUTBACKER SPLIT except breaks down into 3-2 ft. sections, storage pouch included	Model #OB-8TRI	\$319.00
OUTBACKER MARINER	includes ham bands 75m-40m 20m-17m-10m and Marine ITU bands; 2.182MHz - 4.1MHz - 6.2 MHz - 8.2 MHz - 12.4MHz - 16.5 MHz - 22.1MHz	Model #OB-M	\$389.00
OUTBACKER JR	4 ft, 150 watts P.E.P.	Model OB-JR8	\$229.00
OUTBACKER SPRING & BASE	3/8-24 threads only, spring construction is zinc-plated spring, steel base is nickel-plated machined brass and SO-239 RF termination. Requires 1/2" hold for mounting	Model OB-SB	\$82.00

The KT-34A and KT-34XA have become pace-setters for tribander performance. The four element KT-34A offers an unusually compact solution for a three-band high performance installation. The six element KT-34XA has been designed to outperform all commercially available tribanders and many monobanders as well. The high performance of these tribanders results from their innovative construction. Traps, coils, and capacitors found on conventional tribanders are replaced by lossless linear loading and high-Q air capacitors constructed of aluminum tubing. These techniques coupled with KLM's unique dual-driven element system allow broadband performance with high gain and low VSWR remaining nearly constant across the three bands. The KT-34A can be upgraded to the KT-34XA at any time.

The boom length of the KT-34XA is doubled, when one tri-resonant and one full size 10 meter element is added. These changes increase the gain to 11-11.3 dBd on 10M, 9-9.5 dBd on 15M, and 8.5-9 dBd on 20M.

Structurally, the KT-34A is built tough. All the aluminum, including the boom, is strong weather resistant 6063-T832 alloy. All the hardware is stainless steel except for the mounting U-bolts. Virtually indestructible Lexan insulators support the elements and insulate them from the boom. Rotation is possible by most any ham rotor. Wind balance and wind survival are excellent.

KT-34A



SPECIFICATIONS

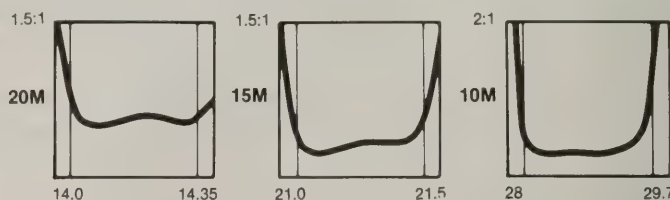
ELECTRICAL

BANDWIDTH 14.0-14.350 MHz
 21.0-21.450 MHz
 28-29.7 MHz
 GAIN 7 dBd \pm 0.3 dB
 VSWR 1.5:1
 F/B-F/S 20 dB/30 dB
 FEED IMP 50 Ohms w/Balun
 BALUN 4:1, 5 kW PEP

MECHANICAL

ELEMENT LENGTH 24 ft.
 BOOM LENGTH 16 ft.
 TURN RADIUS 16 ft.
 WINDLOAD 6 sq. ft.
 WEIGHT 45 lbs.
 MAST 2 in. O.D.

KT34A vs. SWR



KT-34XA



SPECIFICATIONS

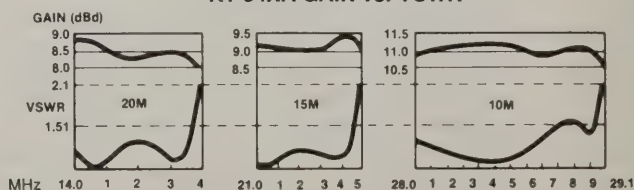
ELECTRICAL

BANDWIDTH 14.0-14.350 MHz
 21.0-21.450 MHz
 28-29.1 MHz
 GAIN 8.5-9 dB
 9-9.5 dB
 11-11.3 dB
 VSWR 1.5:1
 F/B-F/S 20 dB/40 dB
 FEED IMP 50 Ohms w/Balun
 BALUN 4:1, 5 kW PEP

MECHANICAL

ELEMENT LENGTH 24 ft.
 BOOM LENGTH 32 ft.
 TURN RADIUS 21.5 ft.
 WINDLOAD 9 sq. ft.
 WEIGHT 68 lbs.
 MAST 2 in. O.D.

KT-34XA GAIN vs. VSWR





VHF-UHF ANTENNAS

2 METER YAGIS

2M-16LBX

2M-13LBA

2M-11X

2M-8

2M-4X



2 METERS

2M-20 LBX

2M-16 LBXM

2M-13 LBA

2M-11 X

2M-8

2M-4 X

ELECTRICAL:

BANDWIDTH	SPEC. 144-146	144-148 MHz	144-148 MHz	SPEC. 144-146	144-148 MHz	144-148 MHz
	USABLE 143-148			USABLE 143-148		
	144-15.5 dBd	144-14.5 dBd				
GAIN	145-15.5 dBd 146-15.4 dBd	145-14.5 dBd 146-14.4 dBd	13.3 dBd	12.5 dBd	10.3 dBd	8.5 dBd
	147-15.3 dBd 148-13.7 dBd	147-14.3 dBd 148-13.2 dBd				
VSWR	Less than 1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
F/B	Greater than 30 dB	20 dB	20 dB	20 dB	30 dB	20 dB
BEAMWIDTH	E=26°, H=28°	E=26°, H=29°	E=28°, H=33°	E=30°, H=34°	50°	62°
FEED IMP	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BALUN	4:1, 2 kW Coax	4:1, 2 kW Coax	4:1, 2 kW Coax	4:1, 2 kW Coax	1:1 Sleeve, 2 kW	4:1, 2 kW Coax

MECHANICAL:

ELEMENT LENGTH	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.
BOOM LENGTH	38.5 ft.	28 ft.	21.5 ft.	15 ft., 4 in.	7.25 ft.	4.2 ft.
TURN RADIUS	21 ft. 10 in.	15 ft. 5 in.	13 ft.	9 ft.	4 ft.	4 ft.
WINDLOAD	2.19 sq. ft.	1.75 sq. ft.	1.6 sq. ft.	1.38 sq. ft.	.65 sq. ft.	.25 sq. ft.
WEIGHT	17 lbs.	10 lbs.	9 lbs.	5.5 lbs.	4 lbs.	2 lbs.
MAST	2 in.	2 1/8 in. max.	2 in.	2 1/8 in. max.	1 1/2 in. max.	1 1/2 in. max.

440-16X

440-10X

440-6X

1.2-15LBX

1.2-24LBX



440 MHz

432 MHz

1296 MHz

440-16X

440-10X

440-6X

432-30 LBX

432-20 LBX

1.2-44 LBX

1.2-24 LBX

1.2-15 LBX

ELECTRICAL:

BANDWIDTH	420-450 MHz	420-470 MHz	420-470 MHz	430-440 MHz	425-440 MHz	1260-1300 MHz	1260-1300 MHz	1260-1300 MHz
GAIN	14.0 dBd	11.5 dBd	8.9 dBd	17.3 dBd	15.3 dBd	18.2 dBd	16.2 dBd	13.6 dBd
VSWR	Less than 1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
F/B	Greater than 20 dB	20 dB	20 dB	20 dB	20 dB	39 dB	39 dB	39 dB
FEED IMPEDANCE	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BALUN	Coax "N" 4:1, 2 kW	Coax "N" 4:1, 2 kW	Coax "N" 4:1, 2 kW	1:1 Sleeve, 2 kW	1:1 Sleeve, 2 kW	4:1 Rigid Coax	4:1 Rigid Coax	4:1 Rigid Coax
BEAMWIDTH	E=28°, H=32°	48°	60°			E=16°, H=18°	E=22°, H=24°	E=28°, H=30°

MECHANICAL:

ELEMENT LENGTH	14 in. max.	14 in. max.	14 in. max.	14 in. max.	14 in. max.	4.5 in.	4.5 in.	4.5 in.
BOOM LENGTH	10 ft. 3 in.	4.75 ft.	28 in.	21 ft. 11 in. (9.6 wavelength)	12 ft. 4 in. (5.42 wavelength)	12 ft. 4 in.	75 3/4 in.	42 in.
TURN RADIUS	6 ft.	4.90 ft.	2 ft. 5 in.	12 ft. 4 in.	7 ft.	84 in.	38 in.	43 in.
WINDLOAD	0.74 sq. ft.	0.53 sq. ft.	0.2 sq. ft.	1.72 sq. ft.	0.9 sq. ft.	1 sq. ft.	1/2 sq. ft.	1/4 sq. ft.
WEIGHT	7.5 lbs.	4 lbs.	1.2 lbs.	9 lbs.	5 lbs.	10 lbs.	7 lbs.	4 lbs.
MAST	1 1/2 in.	1 1/2 in.	1/12 in.	2 1/8 in. max.	1 1/2 in.	2 in. O.D.	up to 2 in. O.D.	up to 2 in. O.D.
MOUNT	Center	Rear	Rear	Center	Center	Center	Center	Rear



SATELLITE CIRCULARS - VHF/UHF

ELECTRICAL:

	2M-14C	2M-22C	435-18C	435-40CX
BANDWIDTH	144-150 MHz	144-150 MHz	420-450 MHz	420-450 MHz
GAIN	11 dBc	13 dBc	12 dBc	15.2 dBc
VSWR	Less than 1.5:1	1.5:1	1.5:1	1.5:1
F/B	Greater than 20 dB	20 dB	20 dB	20 dB
FEED IMP	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BEAMWIDTH	38°	34°	34°	25°
ELLIPTICITY	3 dB max	3 dB max	3 dB max	3 dB max
BALUN	(2) 4:1 coax, 2 kW*	(2) 4:1 Coax, 2 kW*	(2) 4:1 Coax, 2 kW*	(2) 4:1 Coax, 2 kW*

MECHANICAL:

ELEMENT LENGTH	40.625 in. max	40.625 in. max	13.25 in. max	13.625 in. max
BOOM LENGTH	12 ft. 9 in.	19 ft. 1 in.	7 ft. 4 in.	14 ft. 7 in.
TURN RADIUS	7 ft.	11 ft.	7 ft.	8 ft., 9 in.
WINDLOAD	1.25 sq. ft.	1.85 sq. ft.	0.5 sq. ft.	1.16 sq. ft.
WEIGHT	7.5 lbs.	11 lbs.	4.5 lbs.	10 lbs.
MAST	2 in.	2 in.	1.5 in.	1.5 in.
MOUNT	Center	Center	Rear	Center
POLARITY	Circular R.H. and L.H. switchable using CS-3			

*Derate to 250W when using Switchers (supplied)



HF LOG PERIODICS

KLM's Log Periodic Antennas offer extended coverage of the amateur bands and intermediate frequencies. The **10-30-7LPA** for example, covers 20, 15, and 10 Meters plus the WARC bands and many MARS frequencies. The addition of the **40M-1** dipole module provides 40 Meter operation as well. This can easily be accomplished using the **SK-8** Conversion Kit. This system is also available complete as the **7.2/10-30-LPA**. All HF Log Periodic Antennas are available with a Heavy Duty Boom at additional cost. Also, 10kW Baluns are available for a nominal charge.

ELECTRICAL:

	10-30-7LPA	7.2/10-30LPA	6-30-15LPA
BANDWIDTH	10-30 MHz	7.2/10-30 MHz	6-30 MHz
GAIN	7 dBd typ	3/7 dBd typ	5.5 to 8 dBd
VSWR	1.5:1 typ	1.5:1 typ	2:1 and less, typ
F/B	15 dB	10/15 dB	15 dB typ
FEED IMP	50 Ohms, unbal.	50 Ohms, unbal.	50 Ohms, unbal.
BALUN(S)	4:1, 5 kW	4:1, 5 kW	(3) 4:1, 4 kW PEP

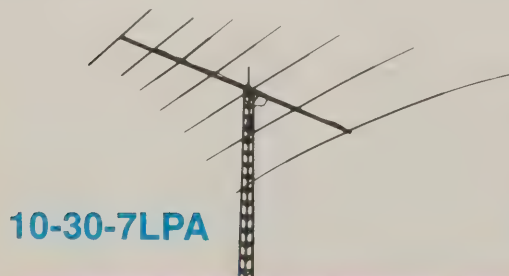
MECHANICAL:

ELEMENTS	7	8	1.5
ELEMENT LENGTH	43 ft.	46 ft.	48 ft.
BOOM LENGTH	30 ft.	42 ft.	46 ft. (6-12-8)
TURN RADIUS	26 ft.	32 ft.	30 ft. (10-30-7)
WINDLOAD	8.25 sq. ft.	12 sq. ft.	24 sq. ft.
WEIGHT	70 lbs.	100 lbs.	150 lbs. (6-12-8) / 70 lbs. (10-30-7)
MAST	2 in.	2 in.	2 in./3 in.

SK-8 Conversion Kit

This kit enables you to add 40 Meters to your **KLM 10-30-7LPA** antenna. The **SK8** kit includes a boom extension, a beta match for the dipole and all the necessary hardware including a full set of instructions. Purchase a **KLM 40M Dipole** to finish the upgrade.

By upgrading your present 10-30-7LPA to include 40M you will enjoy increased Front-to-Back on 20M and will see Front-to-Back gain on 40M similar to a 2 element beam. You will also enjoy forward gain on 40 Meters through the interaction of the full log array. It's an easy way to upgrade your log.



10-30-7LPA



7.2/10-30LPA



6-30-15LPA

5 Locations • Large Stocks • Low Prices • Top Trades • Fast Shipping • Toll Free Lines • 4 In-House Service Centers • AES® Credit Card



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ELECTRONIC SUPPLY®**
OVER 38 YEARS IN AMATEUR RADIO!

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Fax 216-585-1024

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Orlando, FL 32803
407-894-3238 • 800-327-1917
Fax 407-894-7553

CLEARWATER, FL

1898 Drew Street
Clearwater, FL 34625
813-461-4267 • 800-557-4237/FL
Fax 813-443-7893

LAS VEGAS, NV

1072 N. Rancho Drive
Las Vegas, NV 89106
702-647-3114 • 800-634-6227
Fax 702-647-3412

HEADQUARTERS - MILWAUKEE, WI

5710 W. Good Hope Road • Milwaukee, WI 53223 • 414-358-0333 • 800-558-0411 • Fax 414-358-3337
24-hour BBS 414-358-3472 (8-N-1, up to 28,800 baud)

NMO 2/70 SH

Legendary Larsen quality is now applied to a short whip dual band antenna. Just 17" tall, the new model NMO 2/70 SH is 16" shorter than the standard NMO 2/70. Enclosed coil construction reduces wind noise and the heavy duty spring base adds greater durability.

Frequency:	144-148 MHz, 440-444 MHz		
Gain:	Unity	Impedance:	50 ohms
Power Rating:	100 watts	Mount:	3/4" NMO Type
Height:	17"	Color:	Black base, chrome whip
Rod:	17-7 Stainless Steel Kulrod Copper Plated		
Base:	NMO mount, resin polymer plastic		
Warranty:	3-year, No-Nonsense		

MM 2/70

The Larsen MM 2/70 is a high performance magnetic mount antenna designed for demanding amateur applications. The compact mount is available with durable stranded coax and has a 54 lb. pull strength.

Frequency:	144-148 MHz, 440-444 MHz		
Gain:	Unity	Impedance:	50 ohms
Power Rating:	100 watts	Height:	17"
Rod:	17-7 Stainless Steel Kulrod Copper Plated		
Base:	3" Round Mag Mount		
Color:	Black	Coax:	RG 58A/U, Stranded, 12"
Warranty:	3-year, No-Nonsense		

NMOQ 2/70 B

This Motorola style antenna is a 3/4" hole mount. The NMOQ 2/70 B is standard with a black open coil and black whip.

Frequency:	144-148 MHz, 440-444 MHz		
Gain:	Unity	Impedance:	50 ohms
Power Rating:	100 watts	Height:	18"
Rod:	17-7 Stainless Steel Kulrod Copper Plated		
Base:	3/4" hole; Motorola		
Color:	Black base, black whip		
Warranty:	3-year, No-Nonsense		

NMO 2/70 SH

MM 2/70

NMOQ 2/70 B

The Clear Choice

NEW PRODUCTS FROM LARSEN

NMO SERIES

Larsen's own version of the standard 3/4" Motorola TAD/TAE type mount uses advanced design, materials, and construction to provide a premium mount. The NMO series has a resin polymer plastic shell for demanding outdoor applications and is UV and chemical resistant. The plastic shell is completely molded around the nickel plated brass whip stud to eliminate any problems caused by moisture. The superseal gasket also greatly reduces water intrusion under the base. It is available with a standard black base and chrome whip; black whip available upon request.

NMO 27 C (10M)

Freq.:	27-31 MHz	Type:	Loaded 1/4 Wave
Gain :	Unity	Max. Height:	53"

NMO 150 C (2M)

Freq.:	144-174 MHz	Type:	5/8 Wave
Gain:	3 dBd	Max. Height:	51.75"

NMOQ SPEC

Freq.:	136-512	Type:	1/4 Wave
Gain:	Unity	Max. Height :	21"

NMO 220 C (1.25M)

Freq.:	220-225 MHz	Type:	5/8 Wave
Gain:	3 dBd	Max. Height :	34.5"

NMO 440 C (70CM)

Freq.:	440-460 MHz	Type:	5/8 over 1/2 Wave
Gain:	4.5 dBd	Max. Height:	33"

NMO 2/70 C (DUAL)

Freq.:	144-148, 440-450 MHz
Type:	5/8 Wave VHF, Collinear UHF
Gain:	2.4 dBd VHF; 4 dBd UHF
Maximum Height:	36.75"



NMO 27 C
NMO 150 C
NMO 220 C



NMO 440 C



NMO 2/70 C

KULGLASS SERIES

The Kulglass (KG) Series uses a patented low impedance design, state-of-the art production and advanced materials to produce the world's best on-glass antenna. The low profile design blends aesthetically with the vehicle. The KG Series uses advanced resin polymer plastic to completely enclose the circuit board for mechanical durability and weather resistance. 3M's best adhesive tape, plus Larsen's unique bonding enhancers ensures the best possible grip to the glass.

KG 144 UD PL

Freq.:	144-160
Max. Height:	48"

KG 220 UD PL

Freq.:	220-225
Max. Height:	26.5"

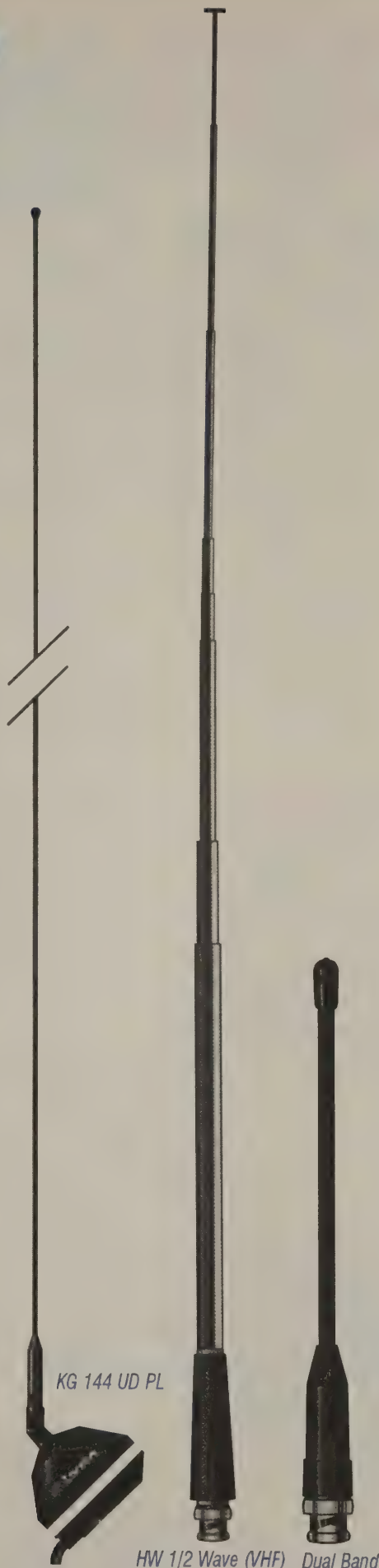
KG 440 UD PL

Frequency:	440-460
Max. Height:	15"

KG 2/70 UD PL

Freq.:	144-148; 442-448
Max. Height:	32.75"
Type:	1/2 Wave VHF
Gain:	2.4 dBd VHF
Connector:	PL 259 (Loose)

Comments: KG 270 UD PL - UHF Gain: 4.5dBd
Electrical: Collinear



KULDUCKIE SERIES

Superior transmit range and tough mechanical durability are the mark of Larsen portables. All center cores are of brass or copper plated steel to maximize RF emission. Fully soldered connections and silver plated components improve electrical efficiency. Double spring BNCs reduce wear on your radio mount.

KD4 146

Type: *Helical*

KD4 146 HQ (2M)

Type: *1/4 Wave, Helical*

KD14 2M HW (2M)

Type: *1/2 Wave, Telescoping*

KD4 2/70 (70M)

Type: *Loaded 1/4 Wave,*

Freq.: *144-148 MHz*

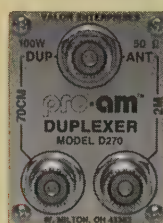
Comments: KD4 2/70 (70M)- UHF Freq.: 442-448 MHz; UHF Type: 1/4 Wave,

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by **Valor**® "The Clear Connection"



\$39⁹⁵

2m/70cm Duplexer

► Model D-270

Connects a VHF/UHF dual band antenna with a single feedline to separate 2m and 70 cm transceivers or a dual band transceiver without a built-in duplexer. Use in reverse for connecting separate antennas to a 2m/70cm dual band transceiver with only one RF output.

144/440 Dual Band Glass Mount Antenna

► Model GM-270

- 144-148 and 440-450MHz
- Gain: 2.6dB at 2m and 6.3 dB at 70cm
- Typical VSWR: less than 2.0:1 through the bands
- Maximum power: 50 Watts
- Field tunable
- 14 ft. RG-58 cable with PL-259 connector
- 26" whip—copper plated and black finished
- Instructions and Mounting Hardware Included

\$39⁹⁵

144/440 DUAL BAND Magnet Mount Antenna

► Model PM-144-440BN

Dual Band Antenna Kit: Includes 19 inch stainless steep whip, powerful 3 inch magnet mount base, 12 ft. of RG-58 coax cable and BNC connector.

Specifications	2 meters	UHF
MHz Frequency	144-148	435-450
SWR	<2:1	2:1
Gain	Unity	2.1 dBi
Power, FM	150 watts	150 watts

\$29⁹⁵

144/440 DUAL Band Magnet Mount Antenna

► Model MM-270B

- 144-148 and 440-450MHz – 1/4 wave length (2m) and 5/8 wave length (70 cm).
- Typical VSWR: less than 1.5:1 through the bands.
- Maximum power: 50W (2m), 25W (UHF)
- 1-1/8" diameter black ABS base with *strong* Rare Earth magnet
- Height: less than 20 in.
- Brass ferrule, black chrome finished
- 9 ft. RG-174 cable with BNC Connector
- Weight: 2 ounces

\$39⁹⁵

144/450

Dual Band Rubber Duck

► Model 77-BNC

12 in. Flexible Rubber Duck Antenna with BNC Connector

Specifications	2 meters	UHF
MHz Frequency	144-148	435-450
SWR	<2:1	2:1
Gain	Unity	2.1 dBi
Power (FM)	50 watts	50 watts

\$19⁹⁵

Low Cost 2 Meter Magnet Mount Antenna

► Model VAA-002

A 1/4 wavelength on 2 meters, but the stainless steel whip section can be easily trimmed for operation up to 450MHz. The *strong* magnet mount base with "no scratch" rubber boot for protection mounts almost anywhere on vehicle. Rated for 200 watts and comes ready-to-go with 12 ft. of RG-58 coaxial cable and PL-259 connector.

► **Model VAA-002BN** is the same but has a BNC-type connector for direct connection to handhelds, etc.

**VAA-002
\$19⁹⁵**

**VAA-002BN
\$22⁹⁵**

Magnet Mount

► Model PAM

Motorola style mount. Low profile, chrome plated – 3 3/8" diameter with 12 ft. cable and PL-259 connector.

\$24⁹⁵

Window Mount

► Model WMSLBNC

Attaches to vehicle window, accepts BNC antenna. Comes with 6 ft. cable with BNC connector.

\$29⁹⁵

Maxi-Magnet Mount Kit

► Model MM-3401

Strong! Includes three big 5" magnets on a heavy aluminum frame with 3/8" x 24-thread mount, 17 ft. RG-58 cable and PL-259 connector.

\$49⁹⁵

ROHN Towers**Heavy Duty or Extra Heavy Duty for HAM RADIO applications**

Rugged, all Steel Construction • "X" Brace for greater strength • Galvanized finish for long life • Tower can be fully assembled on the ground and hinged up, or built vertically, section by section • Load is rated for Free Standing, no guy wires • Supplied with Base Stubs for concrete mounting, and Rotator Plate.

Model	Ht.	Windload	Weight
HBX-40	40 ft.	10 sq. ft.	228 lbs
HBX-48	48 ft.	10 sq. ft.	303 lbs
HBX-56	56 ft.	10 sq. ft.	385 lbs
HDBX-40	40 ft.	18 sq. ft.	281 lbs
HDBX-48	48 ft.	18 sq. ft.	363 lbs

See Rohn in the Price List

***IMPORTANT:** ROHN states that "antennas developing a large twisting moment due to wind must not be used on these towers". Antennas should be limited to those having a maximum boom length of not more than 10 ft.

Milwaukee Pick-up or Factory Drop Ship

U.S. Tower

►Featuring a large selection of Self-Supporting Crank-up towers for almost any height and strength requirement. Three compact models ... TMM-series, six standard models ... TX-series, and five heavy-duty models ... HDX-series. Also, seven tubular crank-up models ... MA-series. Plus, a full complement of accessories for various installations. **Factory Drop Ship**
See Price List and the index for display page

Glen Martin Engineering

►Featuring a selection of complete Aluminum Tower Packages, Roof-Top Tripods and the **Hazer** Antenna Tram System
Factory Drop Ship, includes 48-State Shipping
See Price List and the index for display page

UNIVERSAL Aluminum Towers**UNIVERSAL Model 18-50**

50 ft. self-supporting aluminum tower shown installed at the QTH of **W9NHE** in Milwaukee, Wisconsin

FREE STANDING ALUMINUM TOWERS

LIGHTWEIGHT • RUST FREE
EASY TO ASSEMBLE & INSTALL
RUGGED • HAM RADIO, TV/FM

Configurations available from 30-100 ft. with various wind load selections to meet almost any application. Self-Supporting – no need for unsightly guy wires at rated load.

Factory Drop-Ship

See Price List and the index for display page



►**AR-40 (lightweight)** • For large TV/FM and smaller Ham Antennas up to 3.0 sq. ft. windload area when mounted in-tower, or 1.5 sq. ft. mast mounted with supplied lower support bracket. Rotor unit: 17½" h x 8" diameter, 12 ball bearings (two races), disc brake, mast sizes up to 2½" diameter. Automatic, silent control box - just dial and touch for desired direction. Use Belden 8448 8-wire control cable. 14 lbs. **HYG 305 \$199⁹⁵**

►**CD-45-II (medium duty)** • For antennas with up to 8.5 sq. ft. windload area when mounted in-tower, or 5 sq. ft. when mast mounted with supplied lower support bracket. Rotor unit: 17½" h x 8" diameter, 48 ball bearings (two races), disc brake, mast sizes up to 2½" diameter. Illuminated directional indicator, separate snap action brake and rotation switches. Meter face may be reversed for N or S center scale - in unit. Use Belden 8448 8-wire control cable. 20 lbs. **HYG 302 \$279⁹⁵**

►**HAM IV (Heavy Duty)** • For medium-sized antenna arrays with a windload area up to 15 sq. ft. when mounted in-tower, or 7.5 sq. ft. when mast mounted with optional lower support bracket. Rotor unit: 13½" h x 8" diameter, 98 ball bearings (two races), electric locking steel wedge brake. Mast sizes up to 2½" diameter. Illuminated indicator, separate snap action brake and rotation switches, north or south center scale - in unit. Use Belden 8448 8-wire control cable. 24 lbs. **HYG 304 \$379⁹⁵**

►**T'X** Talltwiner (EXTRA HEAVY DUTY) • For large antenna arrays up to 25 sq. ft. windload (in-tower mount only). Rotor unit: Rugged casting-14½" h x 9½" dia., 138 ball bearings (3 races), electric locking steel brake. Mast sizes up to 2½" diameter. Illuminated directional indicator, separate snap action brake and rotation control switches, north or south center scale - in unit. Use Belden 8448 8-wire control cable. 28 lbs. **HYG 303 \$449⁹⁵**

►**HDR-300 (Deluxe Extra Heavy-Duty)** • For large antenna arrays up to 25 sq. ft. windload (in-tower mount only). Rotor: 7" x 9" x 10" h, 138 ball bearings (3 races), solenoid operated locking brake. Masts up to 3" in dia. Digital directional indicator accurate to 1°. Separate brake and rotation controls. Use Belden 8448 8-wire control cable. 55 lbs. **HYG 300 \$949⁹⁵**

HY-GAIN Steel Crank-up Towers
Four Models available: 37, 52, 54 and 70 ft.
Factory Drop-Ship
HY-GAIN HF • VHF • UHF Antennas
Full line available from Stock!
See HY-GAIN in the Price List

PHILLIPS Antenna Rotator

►**U-105 Antenna Rotator** • The drive unit features a durable, one-piece cast aluminum housing, large bearing surfaces, reinforced mast support for lateral loads, and a ball bearing for the thrust (vertical) load. Precision-cut, hardened steel drive train and high torque - well equipped to turn and accurately position small to medium VHF/UHF amateur and the largest TV/FM arrays. The control unit is smooth and quiet, fully synchronized with the drive unit by synchronous motors. **\$69⁹⁵**

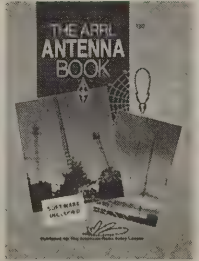
Rotation Range 360° +5°-0
Rotation Time 70 Seconds
Rotation Torque 8 ft.-lbs.
Max. Vertical load 100 lbs.

Support Mast Size 1½"-2" dia.
Control unit 7" w x 5½" d x 2½" h
Weight (Rotator + control) 10 lbs
Control cable (4-wire) ... Belden 8448

►**TB-105 Support Bearing**
For extra-sturdy installation when using the U-105. Relieves wear and tear on the drive unit imposed by wind loads; incorporates an all ball bearing design and weather-tight seal **\$18⁹⁵**

►The ARRL Antenna Book

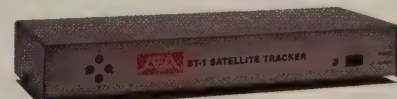
The 17th edition, 736 pages - nearly 1000 illustrations! Discusses: State-of-the-art antenna and transmission line theory and construction. Antenna fundamentals, propagation, transmission lines, yagis, quads, wire antennas. Antennas for limited space, portable, mobile, VHF, UHF, microwave and space. Includes a 3-1/2" disk with quality antenna-related software for the IBM PC & compatibles... **ARR126 \$30⁰⁰**

**Special YAESU Rotators**

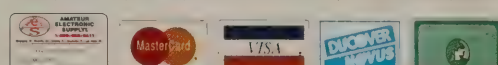
►**G-5400B** Azimuth-elevation Rotator (right) For satellite, moonbounce and other communications work where both horizontal and vertical antenna rotation is required in a single unit. Full 180° rotation. 180° elevation rotation time: 58 seconds; 360° azimuth rotation time: 50 seconds. Handles 440 lbs of vertical load and masts from 2"-2½" Control box has large dual meters which show separate azimuth and elevation indication with ±4% aiming accuracy. Use Belden 8448 8-wire control cable..... **CALL**

►**G-500A** 180° Elevation Rotor (left) For satellites, moonbounce work, etc. Smooth, 180° elevation rotation time: 60 seconds. Large meter with ±3% aiming accuracy. Accepts boom diameters 1¼"-1½". Belden 8448 8-wire control cable..... **CALL**

More YAESU Rotators - See Index



►**AEA ST-1** Satellite Tracker Works with Yaesu 5400B/5600 Az/El rotators, and InstantTrack, QuickTrack, RealTrack software; Tunes FT-736R, TS-790, IC-970, IC-475/275 transceivers. Automatically controls antennas and tuning. As a satellite nears the horizon, antennas are pointed in the proper direction and the rig is tuned to the right up-link/down-link frequencies. As the satellite moves along its path, the antennas track and the transceiver tuning is corrected for the Doppler shift. Uses one serial port and parallel port from host computer. **\$369⁹⁵**



TOWERS & HAZER

- No Tower Climbing
- Work on Antennas from the Ground
- Great for Antenna Experimenters
- PRE-ASSEMBLED WITH ANODIZED ALUMINUM
- 18-8 STAINLESS STEEL HARDWARE
- EASY "WALK UP" INSTALLATION - NO GIN POLES!
- M-13 = 13" face width; 12 SQ. FT. AT 87 M.P.H.
- M-18 = 18" face width; 16 SQ. FT. AT 87 M.P.H.

- As Easy as Running a Flag up a Flag Pole
- High Quality, Lifetime investment tower
- Simple installation, no special equipment
- No Rust, or leg freeze breaks
- Great in salt air environment
- Best tower for severe cold + icy conditions
- Repair your antennas whenever you need

H-5 HAZER
cranked near
top of M1330A
Martin tower. →

You NEED the HAZER The Hazer is a unique tram that rides up & down the outside of your Martin tower. Raise and lower your antennas by simply turning a winch crank! Hazer 2, 3, 4, 5, 6 wrap around the tower and works best on 50 ft. and lower towers with kevlar guywires. Hazer 7 incorporates it's own separate track. M-1860A & M-1870A includes kevlar guy wire sets for two levels. Kevlar guys are stronger than steel and electrically transparent.

COMPLETE TOWER PACKAGE INCLUDES 10-FOOT Tower Sections; Concrete footing; Hinged Base, for walk up erection; HAZER, winch, cable, etc; KEVLAR Guy Wire Kit, turnbuckles, earth screw anchors, hardware; Premium Thrust Bearing, 10-Foot Mast and 8 ft. Earth Ground rod. Shipped motor freight prepaid.

ALL YOU ADD IS CONCRETE, YOUR ROTATOR AND ANTENNAS!

ORDER #	TOWER PACKAGE	FREIGHT PREPAID
M1330A	30 ft., 12 sq. ft., 87 MPH w/Hazer 5	\$1539.56
M1340A	40 ft., 12 sq. ft., 87 MPH w/Hazer 5	\$1744.56
M1840A	40 ft., 16 sq. ft., 87 MPH w/Hazer 6	\$2047.64
M1850A	50 ft., 16 sq. ft., 87 MPH w/Hazer 6	\$2292.64
M1860A	60 ft., 15 sq. ft., 87 MPH w/Hazer 7	\$3195.00
M1870A	70 ft., 15 sq. ft., 87 MPH w/Hazer 7	\$3485.00

**** HAZERS FOR ROHN 20/25G TOWERS: ****

CAT #	MAX LOAD	WIND ABILITY	MADE OF	UPS PPD
H-2	175 Lbs.	12 Sq. Ft.	Aluminum	\$339.95
H-3	150 Lbs.	8 Sq. Ft.	Aluminum	\$245.95
H-4	200 Lbs.	16 Sq. Ft.	Galv. Steel	\$326.95

**ORDER TODAY!
IN STOCK AND
READY TO SHIP**

**PRICES INCLUDE
48-STATE
SHIPPING!**

HB-13
Hinged Base

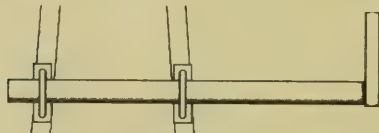
CHB-13
concrete footing

ROOF-TOP TOWERS

Side Arm for adding other antennas, weather gear, etc. 7" high by 1-5/16" diameter mast, U bolt mounting hardware included.

24" Long # RA-6024
\$59.50

48" Long # RA-6048
\$76.50



Set of 8 - 3/8 x 5" Lag Bolts to attach tower to roof
LB 3755 \$7.95

**Supports Beams and Quad
Antennas**

Weather monitors

Scanner & AMSAT Antennas

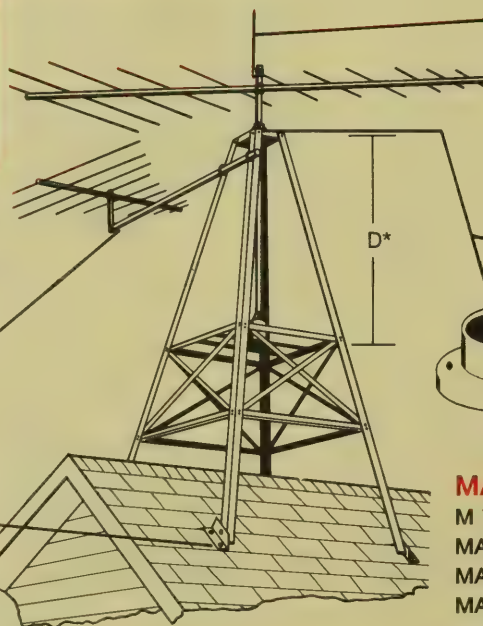
Aluminum construction

Lightweight yet Extra Heavy Duty

Will not Rust / Stainless Steel Bolts

Four Models to choose from

Made in Boonville, Missouri, USA



Lighting Rod kit with Aluminum Tapered Point, Mast Clamp, 8' Ground Rod & clamps, & leg Grounding Lug.
LR-8400 \$148.95

#4 Ground Wire, order length from tip of mast to ground rod
CW-2540 25 ft. \$17.25 CW-5040 50 ft. \$34.50
CW-7540 75 ft. \$51.75 CW-1040 100 ft. \$69.00



Thrust Bearing premium weatherized twin bearing 1.3 to 2.6 mast diameter
TB-25 \$79.95

Mast Adaptor Secures non-rotating masts 1.3 to 2.1 dia. two required, one at tower top & one at base of mast MC-10 \$24.95 ea

MASTS

M 1049	9' x 2" OD .145 wall galv. steel	30 lbs.	\$56.00
MA1049	9' x 2" OD .145 wall alum.	9 lbs.	\$64.95
MA2069	9' x 2-3/8" OD .154 wall alum.	12 lbs.	\$96.00
MA5050	5' x 1-5/16" OD .145 wall alum.	5 lbs.	\$34.95
MA1050	5' x 2" OD .145 wall alum.	7 lbs.	\$51.50

MODEL	Height	*D, inches	Base width	Max Ant. in sq. ft. @ 87 mph 100 mph 112 mph			Max. Ant. weight	Shipping weight	Price w/UPS
RT-424	4.5	34.75	24"	6	4.5	3.6	100 lbs.	22 lbs.	\$144.95
RT-832	8.0	43.75	32"	8	6	4.8	120 lbs.	36 lbs.	\$205.45
RT-936	9.0	43.75	36"	18	13.5	10.5	130 lbs.	78 lbs.	\$356.00
RT-1832	17.5	37.62	32"	12	9	7.2	110 lbs.	88 lbs.	\$493.25



Full Line of Accessories including: • Tower Motor Drives • 5' to 20' Antenna Masts • 20 ft. Chromolly Masts • Thrust Bearings • Mast Raising Fixtures • Rotating bases • Coax arms • Limit Switch Packages

MA SERIES (CRANK-UP TUBULAR TOWERS)

Will handle 10 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
MA-40	40 ft.	21'6"	2	242	3" sq.	4½"	3'x3'x4'	\$ 679.
MA-550	55 ft.	22'1"	3	435	3" sq.	6"	3'x3'x5'	1069.
MA-550MDP*	55 ft.	22'1"	3	620	3" sq.	6"	3'x3'x5'	2618.
MA-770	71 ft.	22'10"	4	645	3" sq.	8"	3'x3'x6'	2258.
MA-770MDP*	71 ft.	22'10"	4	880	3" sq.	8"	3'x3'x5½"	3572.
MA-850MDP*	85 ft.	23'6"	5	1128	3" sq.	10"	4'x4'x6'	4814.

*Standard bases and eve mounts included with all towers (except MA-770, 770-MDP and 850 MDP

• MDP models complete with heavy-duty motor drive with positive pull down.

FREE STANDING CRANK-UP TOWERS

Will handle 18 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
TX-438	38 ft.	22'	2	355	12½"	15"	3'x3'x5'	\$1019.
TX-455	55 ft.	22'	3	670	12½"	18"	3'x3'x6¼"	1499.
TX-472	72 ft.	22'8"	4	1040	12½"	21⅝"	4'x4'x7'	2529.
TX-472MDP*	72 ft.	22'8"	4	1210	12½"	21⅝"	4'x4'x7'	4068.
TX-489	89 ft.	23'4"	5	1590	12½"	25⅝"	4'x4'x8⅞"	4399.
TX-489MDPL*	89 ft.	23'4"	5	1800	12½"	25⅝"	4'x3'x8⅞"	6598.

*TX-472MDP includes heavy duty motor drive with positive pull down. TX-489MDPL comes with heavy duty motor drive with dual level wind and positive pull down. MDPL models include fully operational limit switch packages.

FREE STANDING HEAVY-DUTY CRANK-UP TOWERS

Will handle 30 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
HDX-538	38 ft	21'6"	2	600	15"	18"	3'x3'x6¼'	\$1319.
HDX-555	55 ft	22'	3	870	15"	21⅝"	4'x4'x6½'	2309.
HDX-572	72 ft	22'8"	4	1420	15"	25⅝"	4'x4'x8⅞'	3959.
HDX-572MDPL*	72 ft.	22'8'	4	1600	15"	25⅝"	4'x4'x8⅞'	6048.
HDX-589MDPL*	89 ft.	23'8"	5	2440	15"	30⅝"	5'x5'x8½'	7919.
HDX-689MDPL*	89 ft.	23'8"	5	3450	18"	37⅞"	5'x5'x9½'	15,299.
HDX-5106MDPL*	106 ft.	24'8"	6	3700	15"	37⅞"	5'x5'x9½'	16,649.

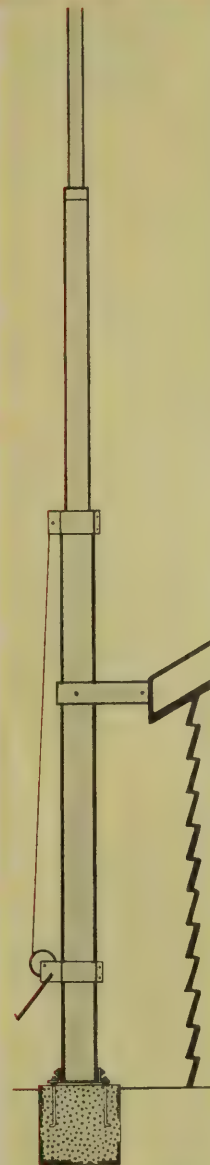
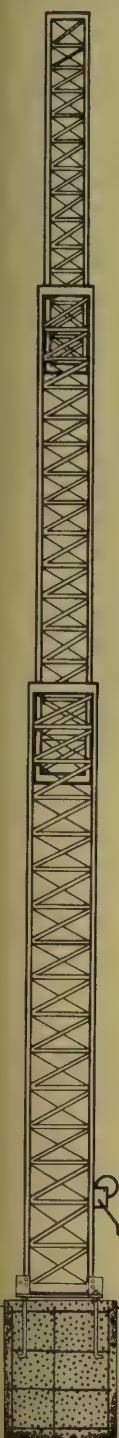
*Includes heavy-duty motor drives with dual level wind and positive pull down. MDLP models include fully operational limit switch packages. *HDX-689MDPL rated 60 sq. ft. of antenna at 50 mph winds. * HDX-5106MDPL rated at 35 sq. ft. of antenna at 50 mph winds.

FREE STANDING "Low Profile" COMPACT CRANK-UP TOWERS

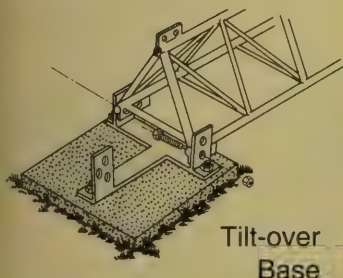
Will handle 18 sq. ft. antennas at 50 MPH winds.

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
TMM-433SS*	33 ft.	11'4"	4	315	10"	18"	3¼'x3'x6'	\$1089.
TMM-433HD	33 ft.	11'4"	4	400	12½"	20⅞"	3'x3'x5¼'	1319.
TMM-541SS	41 ft."	12'	5	430	10'	20⅞"	3'x3'x5½'	1429.

* Rotators must be top mounted



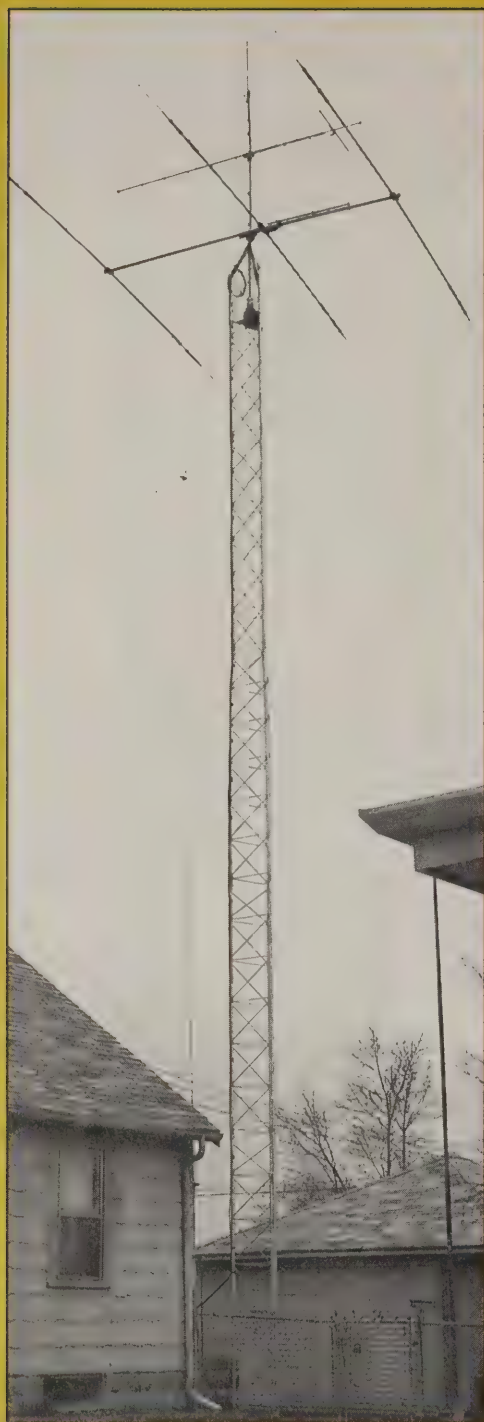
Complete list of accessories shown in the Price List



Tilt-over Base

You may obtain a detailed U.S. Tower Catalog by sending a request and \$1.00 to
Amateur Electronic Supply • 5710 W. Good Hope Road. Milwaukee, WI 53223

UNIVERSAL TOWERS

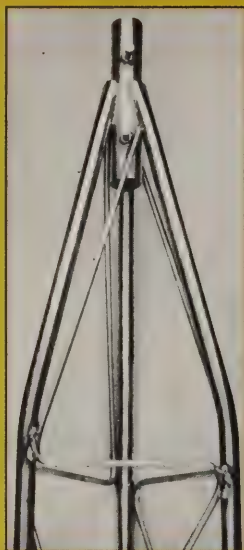


Here's a 50 ft. **UNIVERSAL Self-Supporting Aluminum Tower** installed at the QTH of Ted Willett W9NHE. This set up made a Big difference — he really gets out!

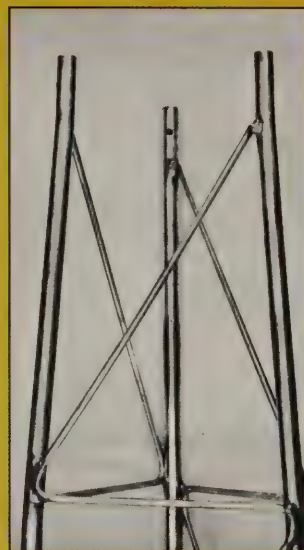
Before you buy a tower consider the advantages of Aluminum — it's Strong, Lightweight, Rust Free and easy to assemble and erect.

UNIVERSAL offers 10 ft. sections or complete towers ranging from 30 to 100 ft. with a choice of wind load ratings and accessories to meet your specific needs.

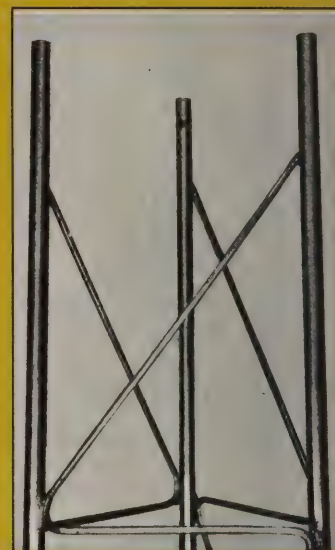
*A listing and description of **UNIVERSAL TOWERS** is shown in the Price List. For more info fill out and mail the Coupon along with \$1.00 to receive their latest Catalog.*



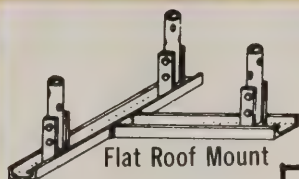
TOP SECTION



TAPER SECTION



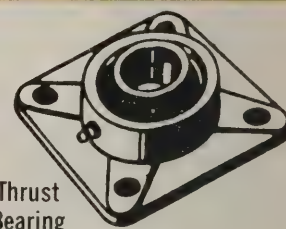
STRAIGHT SECTION



Flat Roof Mount



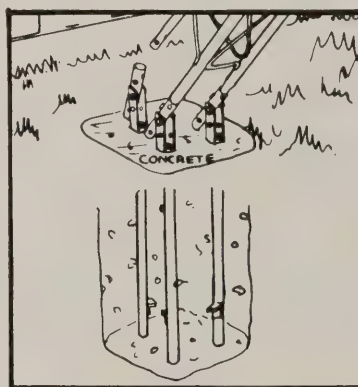
Rotor Plate



Thrust Bearing



Base Legs



Base Legs installed in concrete showing Hinge-Over feature.

Top Section with Thrust Bearing Plate

To: **AMATEUR ELECTRONIC SUPPLY®**

5710 W. Good Hope Road
Milwaukee, WI 53223

**Enclosed is \$1.00 ... please send me the latest
UNIVERSAL TOWERS Catalog.**

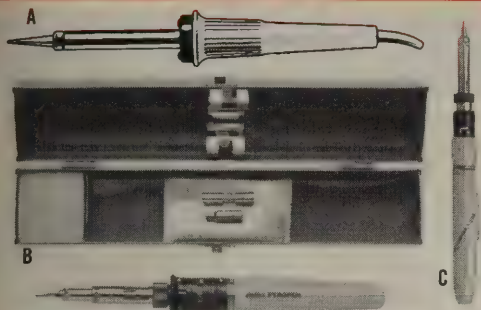
Name _____

Ham Call (if any) _____

Address _____

City _____ State _____ Zip _____

WELLER



► **W-60P** 60-Watt Pencil-type Soldering Iron (A) Handy for most electronic circuit work. Temperature controlled with tips available for 600°, 700°, or 800°F. Supplied with 1/16" 700°F screw-driver tip. Only 7 1/2" long, 2 1/2 oz. 6 ft. cord. 120VAC **\$59⁹⁵**

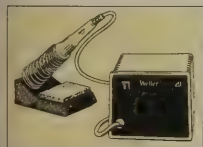
► **WP-25** 25-Watt Pencil-type Soldering Iron (A) For work on more delicate electronic circuits. 750°F tip temperature. 7 1/2" long, 1 1/2 oz. 4 ft. cord. 120V AC **\$29⁹⁵**

► **WST33** Pyroper® Butane Soldering Iron (B) Lightweight and completely portable. Operates for up to 3 hours on a charge of cigarette lighter butane. Soldering temperature control is adjustable from 392° to 932°F, with fast heat-up time. Normally it's ready to solder in just 30-seconds! Supplied with tips for soldering, hot air (1202°F), and brazing **\$74⁹⁵**

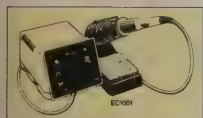
► **WST2** Pyroper® Jr. (C) A portable mini butane powered soldering iron. Recharges in seconds from a regular cigarette lighter butane container. Soldering temperature is adjustable from 392° to 842°F. Also, hot blow feature (806°F) and torch feature (2372°F). Comes with handy pocket clip **\$64⁹⁵**

► **7200PK** A compact, lightweight 75W soldering gun. that handles connectors and almost any other heavier soldering job. The flat, self-supporting back acts as a convenient rest when not in use. Comes with carrying case, extra tip, and solder, 120V **\$26⁹⁵**

► **WTCPT** Controlled Output Soldering Station Provides three temperature ranges: 600°F, 700°F and 800°F. This



lightweight pencil iron is safe for IC soldering. Power unit with unitized on-off rocker switch with indicator light. Storage tray holds extra tip and tip cleaning sponge. **\$109⁹⁵**



► **EC-1002-1** Soldering Station Compact design, the soldering pencil stand connects to right or left side of unit. Variable temperature diode display, self feeding reservoir. Convenient tray stores extra temperature sensing tips **\$189⁹⁵**

When Calling always ask about...

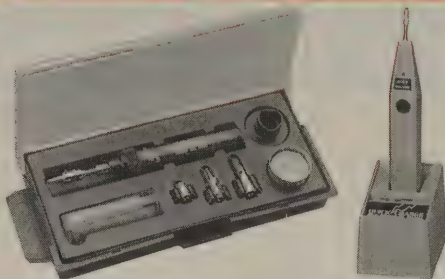
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WAHL



► **7740 ISO-TIP®** Cordless Soldering Iron (right) Tip performance up to 50 watts and over 700°! Contains a premium nicad battery for high-rate charging; a partially discharged unit will return to full capacity within 1 to 2 hours, with a complete recharge in only 3 to 4 1/2 hours. Replaceable battery and work-light. Comes with recharging stand, fine and heavy tips... **\$34⁹⁵**

► **7985 ISO-TIP® B** Butane-Powered Soldering Iron (left) Use as a soldering iron with temperature adjustable to 1067°, as a torch with temperature adjustable up to 2372°, or as a 400° hot blower. From 100/60/30 minutes per refill. Handy kit pack includes soldering iron with protective igniter cap, torch attachment, medium (2.4mm) tip, fine (1.00mm) tip, wiping sponge/well, and in-use stand/rest, and carrying case... **\$49⁹⁵**

Communications Specialists

tone ENCODER & DECODERS

► **SS-32P** Dip switch programmable encode provides 32 standard or EIA tone frequencies in order between 67 and 250 Hz. Microminiature - easily its inside most portable transceivers. 0.9" x 1.3" x 0.4", 6 to 25 VDC **\$28⁹⁵**

► **SS-32SMP** A Super small programmable CTCSS encoder for easy installation in most handhelds. Comes standard with 32 EIA tones between 67 and 203.5 Hz. Individual tones are selectable by soldering binary coded jumpers. 0.53" x 1.0" x 0.16", requires 6 to 15 VDC **\$27⁹⁵**

► **TE-64** A multi-purpose encoder providing 64 frequencies which include 32 sub-audible, 19 burst-tone, 8 Touch-Tone and 5 test frequencies. Separate outputs for the high and low frequency ranges. 5 1/4" x 3.3" x 1.7", 6 to 30 VDC **\$79⁹⁵**

► **TS-32P** Field programmable CTCSS encoder-decoder. DIP switch programmable. All 32 EIA tones from 67-203.5 Hz are included in std. memory. 1 1/4" x 2", 0.4", requires 6 to 25 VDC **\$57⁹⁵**

► **DTD-1** A very small high quality, and low cost DTMF decoder. Capable of decoding any one of 5,040 four digit codes to provide a latched or momentary open collector output for single function operations. Only 1 1/4" x 2" x 0.4", requires 6 to 12 VDC **\$59⁹⁵**

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PIPO Communications

HIGH QUALITY DTMF ENCODERS



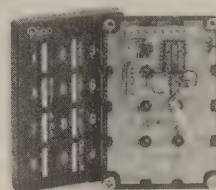
- 12-digit or 16 digit pads
- Steel Keys
- Sealed Gold Dome Contacts
- Self-contained
- NO RFI
- Simple 3-wire connection
- Voltage 8.5 to 16V DC
- Temperature -22 to +160 F
- Adjustable level and timing
- Front panel adjustable
- Includes template, hardware and schematic

Small ! ...

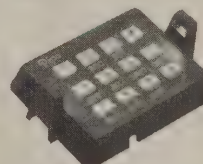
► **PK-1** 2.65" h x 2" w x .045" d ► **PK-2** 2.65" h x 2.5" w x .045" d
► **K-Series** option features a built-in keying circuit and relay to automatically key a transmitter or other system. When any key is depressed, a relay closes for 0-3 seconds, time is adjustable with a trimpot.

► **M-Series** option - a special encoder package for mounting any PK-1/1K, PK-2/2K PIPO encoder to surfaces that are inaccessible from the rear such as walls, mobile dashboards, panels, etc. Consists of a frame which secures to the mounting surface with the encoder press-fitting into the frame.

► **P-7 and P-8 Series** Features similar to the K-Series but rugged-designed for the demanding Land Mobile Industry. Your choice for radios or systems exposed to harsh or abusive environments. **Smallest!** Features miniature electronic design, low distortion, adjustable audio output.



► **P-7H** 12 key, horiz. format, 1.50" h x 2.16" w x 0.20" d
► **P-7V** 12-key, vert. format, 2.16" h x 1.50" w x 0.20" d
► **P-8V** 16-key, vertical format, 2.16" h x 1.50" w x 0.20" d



► **PP-5 Series** A 12-key encoder with sounder to confirm that each key has been fully depressed. Illuminated by two miniature incandescent bulbs. 2.15" h x 3.3" w x 0.5" d, 9-16 VDC.

For Prices see PIPO in the Price List



EIMAC 3-500Z's
\$183⁰⁰ ea. (U.S. mfg.)

or the new
3-500G High Dissipation
with Graphite Plate for Improved Performance
\$99⁹⁵ ea. (foreign mfg.)

High Pass Filter Bargain!

► **ZENITH A-8477** Interference protection from 6-160 meter transmitters. More than 45dB attenuation at 52MHz and lower. For 75Ω coaxial systems, has type-F connectors. 2 x 1 1/4" x 1" **\$9⁹⁵**



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AMATEUR ELECTRONIC SUPPLY®

Used Amateur Radio Equipment List

★ Fully Service Tested ★ 10 Day Trial ★ 30 Day Guarantee ★ Full Credit within 90 Days on Higher Priced New Equipment ★ Only Clean Gear Accepted in Trade ★ The Finest Available ... Anywhere!

Note: This Used Equipment List reflects what was in our inventory when this catalog was printed. We trade, buy and sell a tremendous amount of used equipment, so this is only a representation of what may be available at any given time. Each store (except Clearwater) has immediate on-line computer access of the entire AES use gear inventory by location—one phone call is all that is needed to see if an item is in stock. The letters after the price indicate which location had the particular item the time of inventory: **m** = Milwaukee; **w** = Wickliffe; **f** = Orlando; **c** = Clearwater; **v** = Las Vegas. + after item denotes too many accessories to list.

AEA
MM-3 mem kyr.....\$129 f
ALINCO
DJ-F1T 2m ht.....\$239 w
DR-119T 2m mob.....\$299 w
DR-1200TH2 pkt xcvr \$239mf
EBP-12NA w/chgr.....\$59 w
EDC-16 chgr.....\$9 mw
EDC-34 desk chgr.....\$69 m
EDC-34 desk chgr.....\$69 m
EDC-37 mobile cord.....\$5 m
ALPHA DELTA
MACC outlet strip.....\$29 w
AMERITRON
AL-1200 HF amp.....\$1399 m
AL-80A HF amp.....\$749 c
ATR-15 1.5KW tuner.....\$269 c
ASTRON
RS-10A 7.5a/ps.....\$59 mw
RS-20M 16a/ps.....\$89 f
2412 24-12V/9amp.....\$39 m
B&W
CS3G ant/sw.....\$29 m
CES
SSI-68 patch.....\$209 f
DAIWA
CS-401G coax sw.....\$39 m
DAIWA
CS-401G coax sw.....\$39 m
DK210 elect/keyer.....\$39 m
DIAMOND
MX-3000N triplexer.....\$75 v
DRAKE
R-8 swl w/vhf conv.....\$819 m
GRUNDIG
SATELLIT 500 swl.....\$289 m
YACHT BOY 230 swl.....\$139 v
YACHT BOY 235 swl.....\$99 m
HEIL
HM-10 cord only.....\$5 w
ICOM
AD-15 p/s.....\$29 m
AH-2A auto. tuner.....\$349 mf
AH-2 w/ mt & whip.....\$549 wf
AH-3 auto. tuner.....\$299 fv
BH-73E charger.....\$39 w
BC-74 charger.....\$17 m
BP-110 battery.....\$19 w
BP-113 7.2V/1200ma.....\$59 m
BP-7 13.5V 425ma.....\$50 w
EX-202 lda interface.....\$9 m
HM-46 spkr/mic.....\$19 w
IC-2KL HF amp.....\$1299 f
IC-229H 50w/2m.....\$299 c
IC-2410H 2m/440.....\$569 f
IC-25H 2m 40w mob.....\$239 m
IC-2500 440/1.2 mob.....\$649 m
IC-27A 2m 25w mob.....\$259 mc
IC-2700H 2m/440.....\$639 m
IC-275H 100w/2m.....\$1089 c
IC-281H 50w/2m.....\$299 m
IC-3200A 2m/440.....\$379 m
IC-728 HF xcvr w/cw.....\$769 m
IC-730 HF xcvr.....\$489 m
IC-735 HF xcvr.....\$719 c
C-737A xcvr/tuner+ \$1299 v
IC-751 HF xcvr.....\$799 cf
IC-751 ps/cr64/f170.1049 w
IC-751 HF xcvr w/ps.....\$899 f
IC-765 HF xcvr.....\$1699 f
LC61 case 2SAT/BP-84 14 w
MB-32 mount brkt.....\$9 f
PS-55 power supply.....\$159 v
JPS
NF-60 filter.....\$99 f
NIR-10 filter.....\$269 m
SSTV-1 sstv filter.....\$119 m
JRC
NRD-525 cfi233/vhf \$969 f
NVA-319.....\$169 w
KENWOOD
AT-250 auto tuner.....\$299 f
BC-11 desk chgr.....\$69 m
BT-8 batt holder.....\$20 w
HS-5 headphones.....\$29 w
HS-6 headset.....\$39 w
KNB-7A 12v battery.....\$50 w
MC-48B ttp mic.....\$49 f
MC-50 desk mic.....\$49 m
MC-80 desk mic.....\$79 mw
MC-85 desk mic.....\$99 f
MC-90 desk mic.....\$169 mw
MS-1 mobile chgr.....\$35 f
PS-430 p/s.....\$149 f
RC-10 remote set.....\$99 m
R-2000 swl rcvr.....\$499 cv
R-5000 w/YK-88A1.....\$849 w
R-5000 swl/am/VS-1.....\$889 m
R-5000 w/sv/VF-20.....\$919 m
SMC-33 speaker mic.....\$35 m
TH-225A 2m ht.....\$279 w
TH-25AT uhf ht/BC10.....\$264 w
TM-221A 2m mobile.....\$269 m
TM-241A 2m 50W.....\$289 wf
TS-140S w/YK455C1.....\$739 f
TS-440S w/YK88CN/S.....\$899 m
TS-440S/YK88CN/SN.....\$899 m
TS-440S/AT w/YK88S.....\$969 m
TS-520S w/CW hf xcvr.....\$429 m
TS-530S w/YK88C/SN.....\$569 f
TS-820 w/CW HF xcvr.....\$419 m
TS-830S hf xcvr.....\$649 m
TW-4000A 2m/440.....\$359 c
TW-4000A w/TU-4C.....\$369 m
TW-4100A w/TU-7.....\$409 c
UT-28S 10M module.....\$219 wf
VFO-120 remote VFO.....\$79 m
VFO-700S remote VFO.....\$79 m

VFO-820 remote VFO.....\$89 m
MFJ
1040B preselector.....\$69 w
1214PC interface.....\$109 f
1272BX tnc/sw.....\$29 m
1272MX tnc/sw.....\$29 w
1305 5V power supply.....\$9 w
1312 12V power supply.....\$9 w
1312B 12V p/supply.....\$9 w
1714 2m/telescope /ant.....\$9 w
203 hf dip meter.....\$69 f
208 2m swr analyzer.....\$59 f
249 swr analyzer.....\$139 f
283 speaker mic.....\$19 w
4114 p/s for cw xcvr.....\$39 m
451 cw keyboard/mem.....\$69 m
624D phone patch.....\$65 f
8043 keyer.....\$29 m
816 swr power meter.....\$23 w
941E ant tuner.....\$79 w
948 ant tuner.....\$79 f
959B rx tuner/preamp.....\$59 w
989C 3KW ant tuner.....\$249 mf
NEWTON TVRO
GBS2000 sat test.....\$199 w
NYE
047-002 patch.....\$89 m
PALOMAR
PT-340 Tuner-Tuner.....\$69 m
RANGER
RCI-2970 10m xcvr.....\$319 mw
SANGEAN
ATS-808 swl receiver.....\$129 w
ATS-818 swl receiver.....\$139 w
SGC
SG-2000 hf xcvr.....\$1199 m
SG-2000 w/remote.....\$1249 m
SONY
AN-102 active ant.....\$59 w
ICF-SW7600 swl rcvr.....\$149 m
ICF-SW77 receiver.....\$379 mw
ICF-2002 receiver.....\$149 mw
ICF-2010 receiver.....\$289 mw
ICF-7700 swl rcvr.....\$139 w
IPS-360 gps unit.....\$379 m
PRO-80 scan rcvr.....\$299 mw
STANDARD
C108A 2m mini-ht.....\$179 m
CLC-550 case.....\$15 m
CLC-551 case; 558.....\$15 w
CMU-160 memory exp.....\$19 w
STARTEK
15BG freq/counter.....\$139 f
15UHS freq/counter.....\$119 f
3500 freq/counter.....\$169 f
TEN-TEC
228 ant tuner.....\$149 c
444 HERCULES amp.....\$799 c
585 Paragon hf xcvr.....\$1229 c

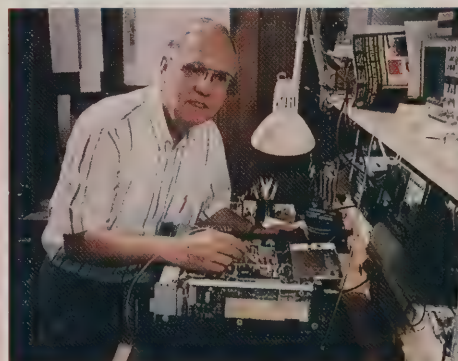
TIMEWAVE
DSP-9 dsp filter.....\$109 m
TRIMBLE
Transpak GPS rcvr+ \$1499 m
UNIDEN
BCT-2 scanner.....\$129 v
BC-70XL portable.....\$99 m
YAESU
CSC-29 case for ht.....\$14 w
E767 cable/FL-7000.....\$15 f
FBA-3 battery.....\$19 w
FBA-8 battery holder.....\$29 w
FC-757AT auto tuner.....\$299 m
FNB-33 4.8V/1200mah.....\$59 w
FP-12 power supply.....\$99 v
FP-700 p/supply.....\$179 m
FRA-7700 indoor ant.....\$39 w
FRB-757 relay box.....\$9 mf
FRG-100B swl rcvr.....\$449 c

FRG-8800 swl rcvr.....\$529 mw
FT-1000D hf xcvr+.....\$3039 m
FT-1012D hf xcvr.....\$469 c
FT-102 hf xcvr.....\$599 c
FT-102 w/3filt/am/fm.....\$689 m
FT-212RH/AD dvs/fts.....\$309 f
FT-2400H 2m/50W.....\$289 cf
FT-2700RH 2m/70cm.....\$349 c
FT-41R 70cm HT.....\$299 m
FT-73R uhf ht.....\$199 v
FT-790R MKII/FTS-7.....\$549 m
FT-815 uhf ht.....\$239 m
FT-840 hf xcvr.....\$679 f
FT-890 hf xcvr.....\$899 w
FV-101 remote VFO.....\$89 c
FV-700DM remote VFO.....\$79 m
MH-1B8 hand mic.....\$19 f
MH-12A2B speaker mic.....\$29 m
MMB20 mob mt/FT-75719 m

MMB38 mobile mount.....\$12 f
MW-1 wireless mic.....\$79 v
NC-29 desk charger.....\$49 v
NC-37 desk charger.....\$89 v
SP-767 spkr.....\$69 f
Y0-901P scope/pan.....\$349 f
YSK-4700 Keyboard.....\$29 w

This Used Equipment list and the Demo Equipment list on the next page were prepared from an actual inventory taken on 4/12/95. Availability and Prices are subject to change without notice. AES® is not responsible for typographical errors.

Check our BBS – 414-358-3472
for Latest Updates on Used/New Equipment, Open Cartons, Demos, etc.
or... Call Milwaukee • Wickliffe
Orlando • Las Vegas
We're Computerized!



Jeff N9EDQ - Sales
Checked, bagged, ready to go!



TERRY W9DIA
Circa 1962

Miles K9HMQ, our Service Manager makes sure all used gear meets original specifications before for it's shipped out.

Terry, the Original King of Traders, began the tradition of Quality Used Gear more than 38 years ago. The standard was set, and the tradition continues on...

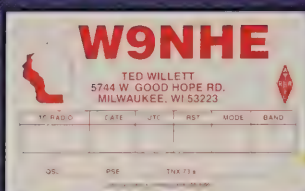


Use your Credit Card!

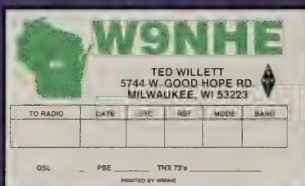
Special Prices on New Equipment Open Cartons and Demos

The following is a list of brand New Equipment that has been demonstrated, on display or restocked. The cartons are no longer factory sealed, but each piece has been checked out in our service department and carries a 100% New Warranty. The letter after the price is the location at the time of inventory. m = Milwaukee; w = Wickliffe; f = Orlando; c = Clearwater; v = Las Vegas. Limited quantities - Order Now! **Used equipment policies do not apply**

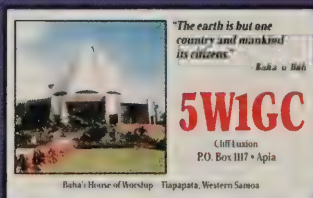
AEA	Special	ICOM continued	Special	MFJ continued	Special
AEA FAXII fax/wire photo program	\$89 ⁹⁵ m	BP-113 7.2V/1200 mah nicad battery	\$79 ⁹⁵ v	624B phone patch	\$76 ⁹⁰ w
DSP-2232 multimode controller	849 ⁹⁵ f	BP-2 425ma/7.2V nicad battery	49 ⁰⁰ m	722 SSB/CW notch filter	67 ⁰⁰ w
IT-1 automatic tuner for ISOLoop	214 ⁹⁵ mf	BP-84 7.2v 1000ma battery	77 ⁹⁵ m	752C Dual tunable SSB/CW filter	85 ⁰⁰ w
MacRatt w/Fax Macintosh program PK-88/232	58 ⁹⁵ m	CT-17 CI-V level converter	99 ⁹⁵ m	9030 5W 30M CW xcvr	139 ⁹⁵ m
PCB-88 tnc card & software for IBM compatible	143 ⁹⁵ m	GP-22 GPS receiver	449 ⁹⁵ m	924 440 mhz 300W PEP tuner/SWR/wattmeter	62 ⁹⁵ v
PC Pakratt II IBM program	50 ⁰⁰ f	H-18 vhf commercial HT	269 ⁹⁵ m	959B Receiver ant tuner w/preamp	79 ⁹⁵ mw
PK-12 1200 bps packet controller	109 ⁹⁵ m	IC-P2AT 2m HT	249 ⁹⁵ fv	962C 1.5K PEP ant tuner	189 ⁹⁵ m
PK-232MBX VHF/HF packet controller	269 ⁹⁵ m	IC-T21A 2m HT w/440 rx	323 ⁹⁵ mw	16010 200w random wire tuner	35 ⁹⁵ v
RL-60 radio link hf remote via ht	260 ⁹⁵ v	IC-W2A 2M/440mhz HT factory refurb	399 ⁹⁵ f	MIRAGE	
SWR-121 hf antenna analyzer	319 ⁹⁵ m	IC-W21AT 2M/440mhz HT/tp factory refurb	339 ⁹⁵ m	A1015G 6m 10/150W amplifier	\$305 ⁹⁵ v
ALINCO		IC-2GXAT/HP 2m 7W FM HT	259 ⁹⁵ w	B108G 2m 10/80W amplifier	174 ⁹⁵ v
DJ-G17/HP 2w 2m FM HT	\$269 ⁹⁵ m	IC-2iA 2m FM HT factory refurb	189 ⁹⁵ m	B-23G 2m 2/30w power amp w/ pre-amp	139 ⁹⁵ v
DJ-582T 2m/440 FM HT	379 ⁹⁵ f	IC-2SAT 2m HT	249 ⁹⁵ f	B-23S 2m 2/30w power amp	99 ⁹⁵ m
DR-119T 2m/45W 2M mobile transceiver	305 ⁰⁰ ww	IC-281H 50W 2m mobile w/9600/440 rx	339 ⁹⁵ w	B-2516G 2m 25/160w power amp	239 ⁹⁵ m
DR-1200TH2 2m/25W 9600 baud only xcvr	269 ⁹⁵ m	IC-3SAT 220 HT	314 ⁹⁵ m	B-5030G 2m 50/300w power amp	499 ⁹⁵ v
DR-600TB 2m/440 mobile transceiver	539 ⁰⁰ w	IC-4SAT 440MHz FM HT	329 ⁹⁵ v	D-3010N 440mhz 30/100W amp	269 ⁹⁵ v
EBP-6N battery	39 ⁹⁵ m	IC-781 HF xcvr w/scope/tuner/keyer s/n 003068	5399 ⁰⁰ m	KP1/6M 6M in shack preamp refurb	99 ⁹⁵ f
EDC-16 filtered mobile cord	10 ⁰⁰ w	IC-781 HF xcvr w/UT-36 voice s/n 001089	4995 ⁰⁰ w	MOTOROLA	
EDC-43 cig liter cable	8 ¹⁰ w	IC-820H 2m/430-440mhz sat xcvr/9600 no mic	1499 ⁹⁵ m	H-5111A marine hand held radio	\$269 ⁹⁵ m
EDH-5 AA dry cell holder	13 ⁹⁵ v	IC-901A 50W 2m/35W 440mhz mobile	839 ⁹⁵ f	NYE	
EME-10 headset w/vox/ptt	61 ²⁰ w	M-11 5W marine band HT	314 ⁹⁵ m	020-001 low pass filter	\$39 ⁹⁵ m
EME-13 headset w/ear bud/mic/vox	59 ⁰⁰ m	M-5 5W marine band HT	329 ⁹⁵ m	047-001 phone patch, 8-pin w/spkr	99 ⁹⁵ v
AMECO		M-56 25W marine band	339 ⁹⁵ m	PALOMAR	
TPA tunable preamp	\$64 ⁹⁵ m	RP-1220 10W 1.2ghz repeater	2349 ⁰⁰ m	P-410X 160-2M 20db xcvr preamp	\$149 ⁹⁵ v
AMERITRON		RP-1520 25W 2M repeater	2199 ⁰⁰ m	PANASONIC	
AL-80B 1.5KW PEP hf amplifier	\$999 ⁹⁵ f	R1-15 .1mhz-1.3ghz hand held rcvr	379 ⁹⁵ m	RF-B45 swl portable	\$152 ⁹⁵ mw
RCS-4 remote coax switch	109 ⁹⁵ v	R100-11 .1mhz-1.856ghz rcvr	593 ⁹⁵ fv	RF-B65 swl portable	214 ⁹⁵ mw
ASTRON		SP-7 small external speaker	61 ²⁰ w	RF CONCEPTS	
RS-12A 9A power supply	\$71 ⁹⁵ m	JPS		2/70H 2m/440 fm 20/200/20/100 amp	\$647 ⁹⁵ v
RS-20M 16A power supply w/meters	109 ⁹⁵ m	NF-60 Auto DSP audio spectral notch filter	\$134 ⁹⁵ m	2-23 2M fm 2/30w ht amp	125 ⁹⁵ v
RS-35A 25 amp power supply	134 ⁹⁵ v	NIR-10 Dlx noise/notch DSP bandpass filter	269 ⁹⁵ m	4-32 440 fm 3/20w ht amp	159 ⁹⁵ m
RS-4L 3amp ps 4amp surge w/cig lighter socket	44 ⁹⁵ v	JRC		RANGER	
B&K		JST-135 hf transceiver display model	\$1239 ⁰⁰ m	RCI-7000 marine xcvr	\$144 ⁹⁵ w
2701 digital multimeter	\$35 ⁹⁵ m	KANTRONICS		RCI-9000 marine xcvr	179 ⁹⁵ f
2830 digital multimeter	169 ⁹⁵ m	DE-2400 modem for Data Engine	\$89 ⁹⁵ m	SANGEAN	
2911 digital multimeter	53 ⁹⁵ m	D4-10 440 packet xcvr	319 ⁹⁵ f	ATS-800 SW receiver	\$69 ⁰⁰ w
B&W		HOSTMASTERII+ software	62 ⁹⁵ m	ATS-808 SW receiver	152 ⁹⁵ wf
FL-10/1500 low pass filter	\$45 ⁰⁰ m	KENWOOD		ATS-818CS SW receiver w/cassette	209 ⁹⁵ m
FL-10/1500/70 low pass filter (72Ω)	16 ⁹⁵ m	AT-50 external auto ant tuner for TS-50S	\$299 ⁹⁵ f	DT-200V receiver	59 ⁹⁵ m
BENCHER		AT-450 internal auto tuner TS-450/690S	188 ⁹⁵ w	SGC	
ST-1 single lever paddle	\$59 ⁹⁵ m	HMC-1 headset for TR-2600A	24 ⁹⁵ m	0401 SG-2000 hf marine xcvr	\$1399 ⁰⁰ fv
BIRD		IF-232C level translator	107 ⁹⁵ mv	SONY	
4304A 25-1000 mhz 500W w/sampler	\$419 ⁰⁰ m	MC-60A desk microphone	129 ⁹⁵ v	ICF-SW15 portable SW receiver	\$69 ⁹⁵ m
CES		MC-90 deluxe desk microphone	199 ⁹⁵ v	ICF-SW30 portable SW receiver	89 ⁹⁵ m
SBI-50 autopatch/controller	\$359 ⁹⁵ m	PB-13 700mah 7.2v battery	57 ⁹⁵ v	ICF-SW7600G port SW receiver	179 ⁹⁵ m
410 personal patch autopatch	149 ⁹⁵ mf	PB-18 1100mah 7.2v battery	78 ⁹⁵ v	ICF-SW7601 portable SW rcvr	100 ⁰⁰ f
COMET		RM-1 remote control	47 ⁹⁵ m	ICF-SW7700 portable SW rcvr	149 ⁹⁵ v
MS3FVMM	\$35 ⁹⁵ v	R-2000 swl receiver	584 ⁹⁵ m	PRO-80 handheld SW receiver	299 ⁹⁵ m
SB-25NMO 2m 4.1db 4'8" mobile antenna	44 ⁹⁵ v	SP-23 speaker for TS-450S/690S	79 ⁹⁵ v	STANDARD	
CUSHCRAFT		SW-2100 1.8-30mhz 2KW power meter	134 ⁹⁵ m	C-158A 2M FM HT	\$239 ⁹⁵ m
APR-18A radial kit	\$56 ⁹⁵ v	TH-42AT 440 FM HT	287 ⁹⁵ w	C-168A 2M FM HT	279 ⁹⁵ m
CS-1147M 2m 1/4 wave mag mt antenna	35 ⁹⁶ w	TH-48A 2w 440 HT	349 ⁹⁵ m	C-288A 220mhz FM HT	328 ⁹⁵ m
CS-50M 6m mag mt antenna	53 ⁹⁵ v	TS-140S HF xcvr w/sw rcvr	845 ⁰⁰ w	C-528A 2m/440 FM HT	379 ⁹⁵ m
PS-4 polarity switch	89 ⁹⁵ m	TS-850S/AT 9 band hf xcvr 1-30mhz rx/tuner	1599 ⁹⁵ f	C-558A 2m/440 FM HT	479 ⁹⁵ m
22NSK stacking kit for 2 17B2	99 ⁹⁵ m	TS-950SD hf xcvr 1-30mhz rx/tuner	2199 ⁰⁰ f	C-5608DA 50w 2m/40w 440 mobile	648 ⁹⁵ wf
DAIWA		TS-950SDX hf xcvr 1-30mhz rx/tuner w/DSP	3639 ⁹⁵ m	STARTEK	
CN-101 1.8-150mhz SWR/power meter	\$79 ⁹⁵ m	UT-28S 50w 10m module/TM-742A	279 ⁹⁵ f	15BG counter	\$152 ⁹⁵ v
FORBES		MFJ		3500 frequency counter	179 ⁹⁵ v
VT-44 uhf 2.6 db ventenna	\$39 ⁹⁵ m	1020A indoor active rx antenna	\$72 ⁰⁰ w	UNIDEN	
GRUNDIG		1040B Deluxe receiver preselector	89 ⁰⁰ w	BC1-2 Bear Tracker scanner	\$134 ⁹⁵ mv
SATELLIT 700 swl receiver	\$339 ⁹⁵ mf	1045B receiver preselector	49 ⁰⁰ w	BC-120XLT 100ch hand held scanner	134 ⁹⁵ m
YACHT BOY 400 swl porable receiver	179 ⁹⁵ m	1214PC Multimode interface for IBM	124 ⁹⁵ m	BC-148XLT 16ch scanner	71 ⁹⁵ w
YACHT BOY 206 swl porable receiver	116 ⁹⁵ w	1229 interface	89 ⁹⁵ m	BC-148XLT-1 16ch scanner	89 ⁹⁵ m
HEIL		1270CQ packet TNC w/9600 baud modem	179 ⁹⁵ m	BC-177XL 16ch scanner	99 ⁹⁵ f
BM104K boom mic/headset; Kenwood	\$68 ⁹⁵ m	1274 packet TNC	109 ⁹⁵ m	BC-200XLT 200ch hand held scanner	224 ⁹⁵ w
HC-5 mic element	25 ⁹⁵ m	1276 packet/pactor TNC	134 ⁹⁵ m	BC-2500XLT 400ch hand held scanner	314 ⁹⁵ mf
HM10-5K mic for Kenwood	76 ⁹⁵ v	1278T Turbo controller/2400 baud	224 ⁹⁵ m	BC-55XLT 10ch hand held scanner	79 ⁹⁵ m
TB-1 table base mic stand only for HM-10	11 ⁵⁰ v	1278BT Turbo controller/2400 baud/pactor	299 ⁹⁵ m	HR-2600 25W 10M xcvr	179 ⁹⁵ mw
HY-GAIN		1282B multicom software C-64/128	34 ⁹⁵ m	MC-790 marine xcvr	179 ⁹⁵ m
228 18TD tape dipole	\$159 ⁹⁵ m	1289 multicom software IBM	53 ⁹⁵ m	YAESU	
304 Ham IV ant rotator	332 ⁹⁵ m	1290 multicom software AMIGA	34 ⁹⁵ m	FT-1000 hf xcvr w/tuner/keyer/mic	\$3029 ⁹⁵ mf
305 AR-40 (220 volt version)) rotator	176 ⁹⁵ f	250 dummy load	44 ⁹⁵ m	FT-26/25 2w 2m FM HT	214 ⁹⁵ m
384S 12AVQS 20/15/10M vertical antenna	79 ⁹⁵ m	346 LCD freq counter	139 ⁹⁵ v	FT-5200 50W 2M /35w 440 fm mobile xcvr	593 ⁰⁰ f
ICOM		462B multi reader rty/ascll/cw/amtor	124 ⁹⁵ m	FT-736R 25W 2m/440 FM/ssb xcvr/ps	1628 ⁹⁵ v
AD-12 external power adapt IC-2GAT	\$27 ⁹⁰ m	484C memory keyer	71 ⁹⁵ w	FT-990DC hf xcvr w/XF-109C	1728 ⁹⁵ v
AD-15A power supply	43 ⁹⁰ m	490 keyer/Benchmer paddle combo	134 ⁹⁵ m	MH-15D8 microphone	72 ⁰⁰ w
		492 menu driven keyer	79 ⁹⁵ m	LL-5 phone patch for SP-6	119 ⁹⁵ f



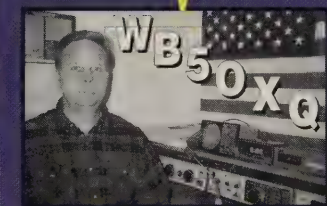
BASIC CARD



2 COLOR CARD



4-COLOR CARD



PICTURE CARD

QSL CARDS MEASURE 3-1/2 X 5-1/2 AND ARE PRINTED ON 10 POINT COATED WHITE STOCK. BASIC CARDS COME IN YOUR CHOICE OF BLACK, RED, GREEN OR BLUE INK AND MAY INCLUDE 2 PIECES OF STOCK ARTWORK. OPTIONS INCLUDE: HOME STATE, ARRL MEMBER LOGO, ANTENNA, OR AMERICAN FLAG. TO INCLUDE A PHOTO, BACKSIDE PRINTING OR 2 OR MORE COLORS. PLEASE SEE ADDITIONAL CHARGES. SPECIAL DESIGNS/4 COLOR CARDS ARE ALSO AVAILABLE! CALL FOR A QUOTE!



John, Mary, Ted (W9NHE), Kary & Jim

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CITY: _____ STATE: _____ ZIP: _____

PLEASE CHECK BOX FOR COLOR, QUANTITY & ARTWORK (Choose 2)

- | | | |
|--|---------------------------------------|---|
| <input type="checkbox"/> ARRL LOGO | <input type="checkbox"/> BLACK | <input type="checkbox"/> 100 - \$24.50 |
| <input type="checkbox"/> STATE LOGO | <input type="checkbox"/> RED | <input type="checkbox"/> 250 - \$31.50 |
| <input type="checkbox"/> ANTENNA LOGO | <input type="checkbox"/> BLUE | <input type="checkbox"/> 500 - \$37.50 |
| <input type="checkbox"/> USA FLAG LOGO | <input type="checkbox"/> SURPRISE ME! | <input type="checkbox"/> 1000 - \$52.50 |

- ☐ I am sending additional clean black & white art (5x7 or less)
Bill me \$10.00 each for additional piece(s) of artwork

- ☐ 2 COLOR CARDS/BACKSIDE/PICTURE PRINTING - Add \$22.00 for each to Base Quantity Price (Please designate color breaks, send photo and/or copy for backside - picture cards will be black & white unless specified.

- ☐ CUSTOM CARD - 4 COLOR - CALL FOR A QUOTE!!

- ☐ CHECK ☐ MASTERCARD ☐ VISA ☐ AMERICAN EXPRESS

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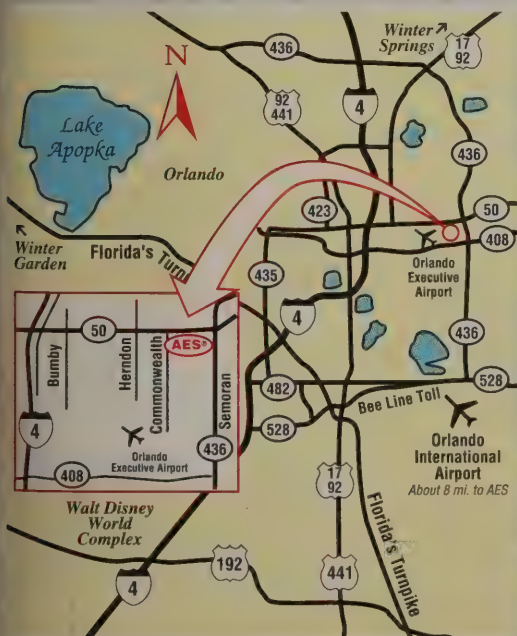
◀ Milwaukee, Wisconsin - Headquarters



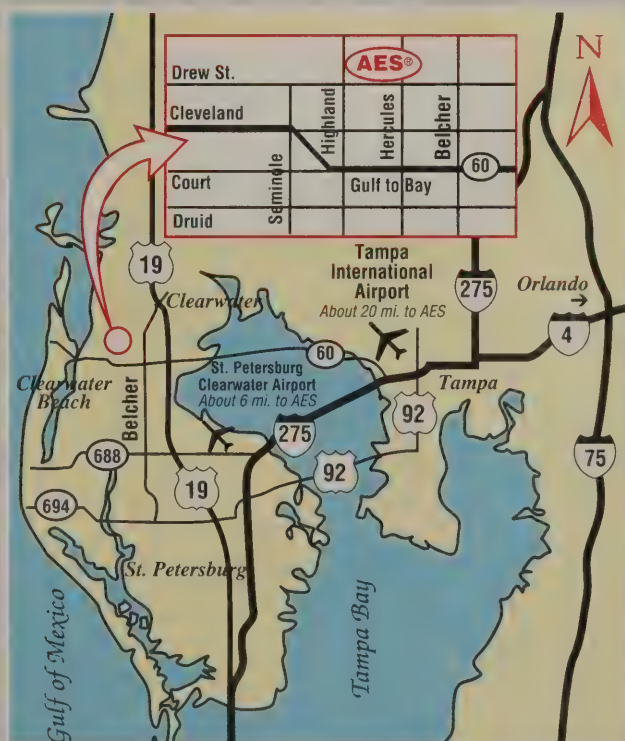
Wickliffe, Ohio ▶



◀ Las Vegas, Nevada



◀ Orlando, Florida



Clearwater, Florida ▶

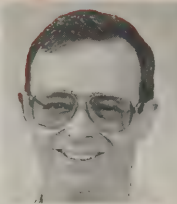
Greetings from the **AES®** Team...



DALE N9BRX **MGR.**



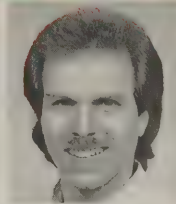
RAY K9KHW



GARY W9NR



RON WA9VRY



JEFF N9EDQ



PAUL W9KHO



JIM WB9LSR



DICK KE9QU



MIKE N9LBQ



JOHN AB9G



RICK N9PMR



CARL WB9STM



PAUL N9KEZ



PAT



STEVE



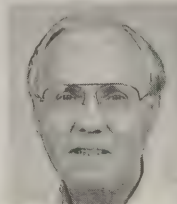
ANTONE



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JOHN N9COB



BARBARA N9RSZ



PEGGY WB9RWV



MARY



CAROL



JOYCE N9XBW



ANITA



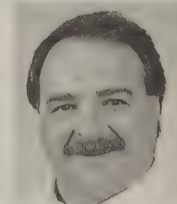
KATHY



ELIN K9YHE



TED W9NHE



JOHN F.



CHRIS N9LBS



DAVE WB8BAG **MGR.**



PHIL WD8AAN



ED N8FIN



BOB WB8WEN



BEN AA8AH



PETER N8JCE



JOHN WA8PKB



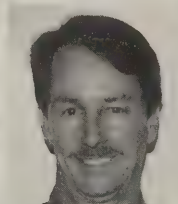
NANCY



GRANT K4IQW **MGR.**



BRUCE WD4HIM



STUART N4IPX



JIM N4LIO



NATHAN KN4BJ



EDDIE KD4RAZ



RICK



CARLOS



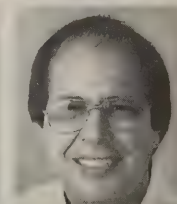
FERNANDO



GIL K4ISK



LEN K4BDP **MGR.**



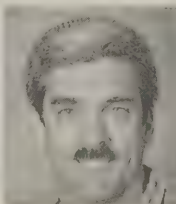
VICTOR N4COU



DAVE AB4ZR



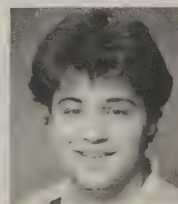
SQUEAK AD7K **MGR.**



TOM N7GBJ

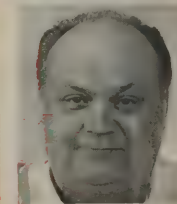


BOB KG7D

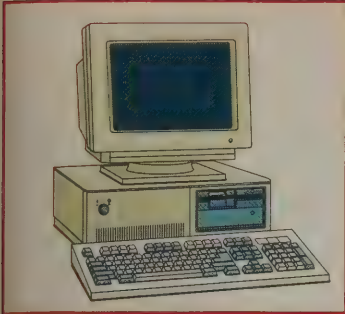


JOHN

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TERRY WDIA
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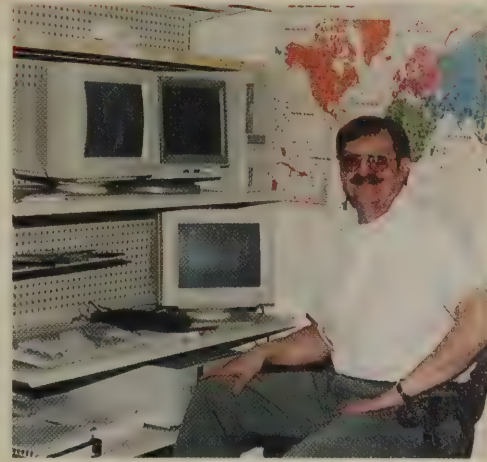


AES® Offers Service On-Line and In-House ...

The **AES® BBS** has been on-line for about a year, and during that period there has been over 10,000 calls logged from 50 states, and more than 25 foreign countries. We're now supporting about 1500 active users.

The system is a 486 (66MHz) PC with 330M harddrive, running DOS 6.22 and the Tribbs V5.11 BBS program. The modem is a U.S. Robotics Courier Dual Standard (28.8kb).

Our sysop is Richard Engel, KE9QU. Richard was licensed in 1969 and has been with AES® for over 11 years. He is very knowledgeable in all phases of amateur radio, especially Digital Communications.



Richard Engel, KE9QU at our BBS Station

Call our BBS at (414) 358-3472 for a Wealth of Information ...

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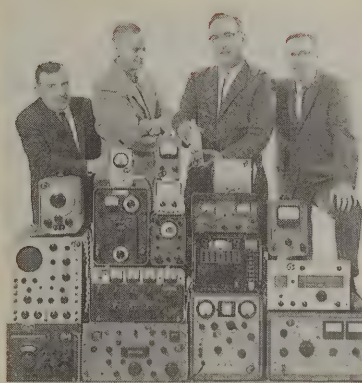
Wickliffe Store Stock Area



Loading up at Orlando



Moving 'em out by UPS



AES® Service Dept. Gang
 (circa 1965)



Kantronics
 Digital
 Seminar at
 AES® Milwaukee
 with
 Phil Anderson
 & Karl Medcalf



A portion of our 50,000+ sq. ft. Mail Order Warehouse in Milwaukee



Dale, N9BRX and Joyce, N9XBW doing Dayton



Circa 1965 - Doc, formerly W9HJS, and Collins S-Line Display



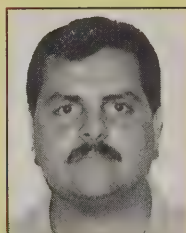
AMATEUR ELECTRONIC SUPPLY® INC.

Proveedores de equipos para radioaficionados hacia las Américas

SERVICIOS INTERNACIONALES



Estamos cerca del Aeropuerto Internacional de Orlando, Florida EUA



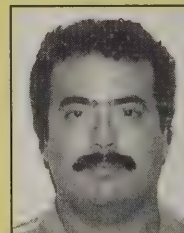
Eddie KD4RAZ



Natán KN4BJ



Jaime N4LIO



Carlos



Fernando

Cinco radioaficionados expertos para antenderles

*Llámenos ... Envíaremos su pedido a la dirección que nos indique ... ¡No Importa Dónde!
¡Ningún pedido es demasiado grande o chico!*

Internacionales 1-407-898-1166

Some Helpful Abbreviations ABREVIACIONES IMPORTANTES

AMP	Amplificador
ANT	Antena
AT	Acoplador automatico de antena
BATT	Batería
BKT	Braket de montura
BPR	Guarda choque
CGR	Cargador
CIG	Conector cigarillo
CNTR	Contador
DB	Decibeles
DLX	Lujo
DPLX	Duplexador
EL	Elemento
FREQ	Frecuencia
GND	Tierra
GTR	Labio de ventana
HT	Radio de mano
HVY	Pesado
KYR	Llave
MA	Miliamperes
MAG	Magnetico
MAINT	Mantenimiento
MIC	Microfono
MT	Montura
MTG	Montura
NMO	Montura Motorola
PROG	Programable
PS	Fuente de poder
PWR	Poder
RCVR	Receptor
REM	Remoto
SENS	Sensitividad
SPKR	Bocina
SPLX	Simplex
SYS	Sistema
TTP	Teclado de botones
VOL	Volumen
W	Con
WPM	Palabras por minuto
XCVR	Transceptor

Para Contactar:

Amateur Electronic Supply® 621 Commonwealth Avenue, Orlando, Florida 32803, EUA
Tel. 1-407-894-3238; Toll Free 1-800-327-1917; Fax. 1-407-894-7553; **Internacionales 1-407-898-1166**

Forma de pago:

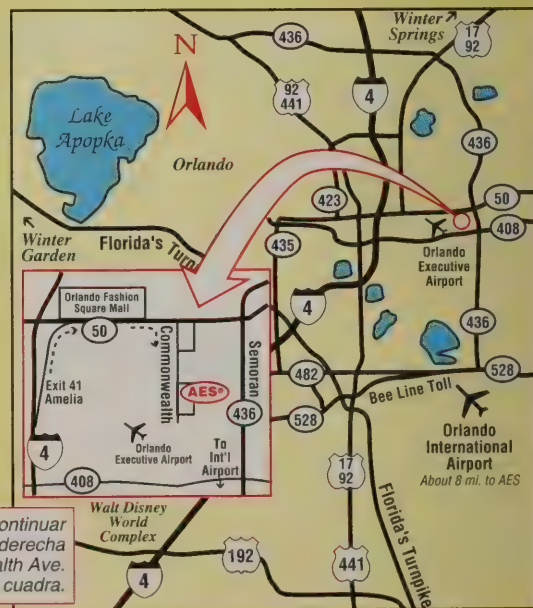
El pago que se prefiere es por transferencia de fondos. No se aceptan giros bancarios internacionales. Las tarjetas internacionales de crédito se aceptan únicamente en nuestros salones de venta. Nuestra dirección para la transferencia de fondos es: Barnett Bank of Orlando, Fashion Square Branch, Orlando, Florida. Routing #063103193, para crédito a Amateur Electronic Supply - Acct. #1300009536.

Método de envío:

El envío se hará de acuerdo con sus instrucciones. Si Vd. no las indicia AES hallará el método más adecuado.

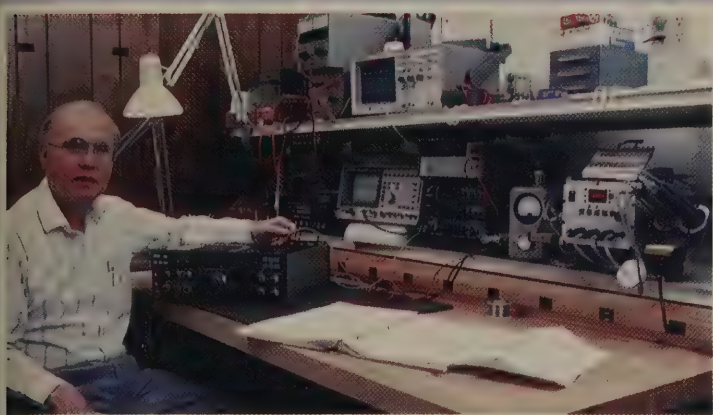
Garantía:

La fábrica garantiza sus equipos únicamente dentro de los Estados Unidos. Si su equipo necesitara reparación debe devolverlo a AES con una copia de la garantía y de la factura dentro del plazo autorizado por el fabricante. AES se reserva el derecho de reparar o substituir el equipo que no funcione como diseñado por razones que no resultaron por daño durante envío. Al recibir el equipo que no funcione o por defectos debe notificarse a AES antes de los 10 días después de recibido. El equipo debe empacarse en la caja original usando los materiales de empaque originales. **El costo del envío, tanto de ida como de vuelta, es por cuenta del cliente.** Los precios y garantías pueden cambiarse sin previo aviso. Algunos productos no se pueden ser exportados a ciertos países de acuerdo con las legislaciones locales.



I-4 este hasta la salida 41 (Amelia) continuar paralelo hasta Colonial Dr. Doblar a la derecha 2.6 millas (4.0 kilo) hasta Commonwealth Ave. doblar a la Derecha 1/2 cuadra.

Our Service Department! ... a Great Reason to Buy from AES®



MILES-K9HMQ • Service Manager

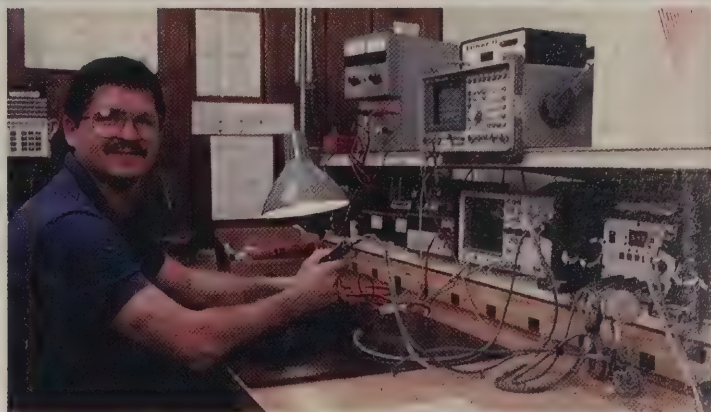
TECHNICIANS: Currently, we have seven technicians. Three are shown at work in their shops in Milwaukee. Also pictured are John-WA8PKB in the Wickliffe, OH store, Gil-K4ISK in Orlando, FL and Bob-KG7D in Las Vegas.

EXPERIENCE: These technicians are all Factory-Trained on the major brands (ICOM, YAESU, KENWOOD), and others. They have more than 70 years of cumulative experience in the ham service field and are FCC and NABER certified.

WE'RE EQUIPPED TO DO THE JOB! Each shop uses a state-of-the-art Hewlett Packard 8920A test set, which replaces several pieces of conventional test equipment. It combines twenty-two different instruments including a spectrum analyzer, tracking generator, digital

WE'RE A FULL SERVICE DEALER! Unlike other Dealers, when you purchase a New Radio from us, our Service Department is able to provide you with Outstanding Technical Service.

If you have a problem, we are determined to keep you on the air! To do this, we offer Priority Warranty Service on ALL New Radios that we sell. You can be assured that if your New Radio fails within 10 days after receiving it, it will be repaired promptly, or we'll replace it. If a failure occurs after the 10 day priority period, it will be repaired under our shop's "Warranty Repairs First" policy, which will get you back on the air with a minimum delay.

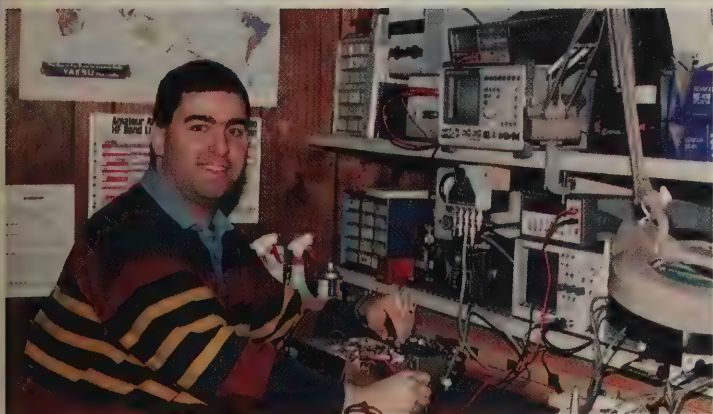


JOHN-N9COB • Service Technician

scope, distortion and SINAD meter, all mode signal generator, frequency counter and more! It's highly stable, very accurate and helps speed repairs because it's I-BASIC computer allows the technicians to store custom test parameters for equipment that they frequently service. We also use H-P's digital scopes and DVM's, plus we have the latest in high-tech soldering stations for work on the latest delicate surface mount technology.

REPAIRS: Whether you purchased from us or not, we can extend our Professional Technical Service to your "out of warranty" late model ham gear. This is on a time available basis, and provided that service parts are still available. To make arrangements, call the AES Service Department in Milwaukee at 414-358-0333; ask for Miles.

LABOR RATES: Our rate for Out-of-Warranty Service is \$51.00 per



PAUL-N9KEZ • Service Technician

hour. Note: There is a \$68.00 minimum charge for service on HF/VHF Base Stations, and a \$51.00 minimum charge on VHF Mobs and Handheld transceivers.

POLICIES AND OTHER INFORMATION: See pps. 158 and 160 for our Policies, Warranty Information and Telephone Numbers of the Major Manufacturers.



JOHN-WA8PKB



GIL-K4ISK



BOB-KG7D

WE'VE GOT IT COVERED!

Outstanding Mail Order Service • AES® Credit Card • SuperFest '95

Our Mail Order Service Gets You What You Want — When You Need It!

SAVE MONEY ON YOUR AES® PURCHASES SHIPPED VIA UPS GROUND IN THE 48 CONTIGUOUS STATES!

AMOUNT OF ORDER

SHIPPING CHARGES

Up to \$100.00	\$4.50
\$100.01 to \$500.00	\$6.50
\$500.01 to \$1,499.99	\$8.50
\$1500.00 and UP	AES® Pays the Shipping!

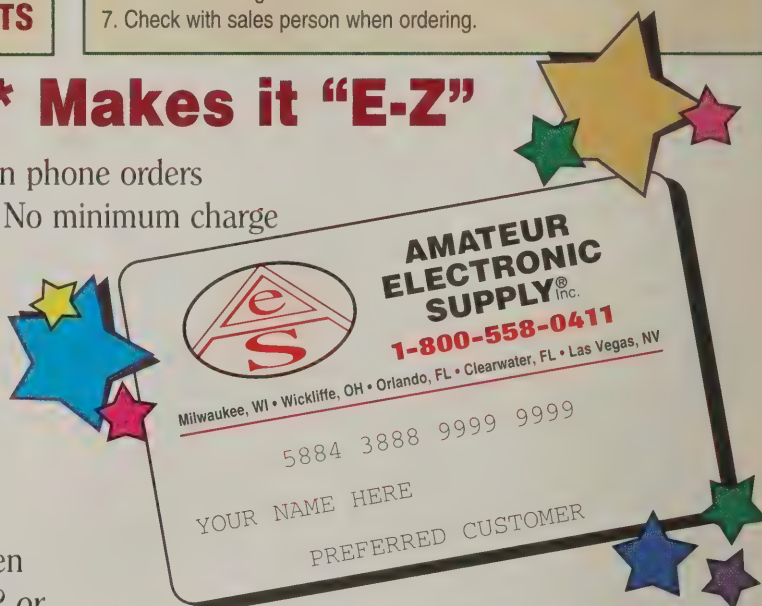
FLAT RATE DOES NOT APPLY TO DROP SHIPMENTS

IMPORTANT INFORMATION

1. Shipping charges are based on amount of the original order. Adding to or deleting from the original order will not affect the shipping charges.
2. The order amount on which charges are determined is pre-coupon and pre-tax.
3. 2nd & 3rd shipments (back-orders) are shipped **PREPAID** at **AES®** expense (UPS ground only).
4. COD fees not included. Add \$6.50 per carton.
5. Shipping charge includes adequate insurance.
6. Other UPS methods (Red, Blue & Orange), RPS, Priority Mail, Parcel Post and Federal Express are charged at Regular Rates without any credit for UPS ground rates.
7. Check with sales person when ordering.

The AES® Credit Card* Makes it "E-Z"

- ◆ Good at All **AES®** Stores in person or on phone orders
- ◆ Use for anything in the **AES®** Catalog – No minimum charge
- ◆ No down payment required
- ◆ No payment for 90 Days (*Interest Accrues*)
- ◆ Low monthly payments
- ◆ No annual fees
- ◆ Quick approval to qualifiers
- ◆ Finance up to \$5,000 ... or more!
- ◆ Be an **AES®** Preferred Customer
- ◆ Leaves other major Credit Card lines open
- ◆ Buy the gear you want NOW ... why wait? or ...
- ◆ Get approved now and have your **AES®** Credit Card ready when you need it



Exclusively
for

AES®

*18.9% APR
CUSTOMERS

COME
TO

AMATEUR ELECTRONIC SUPPLY®
SUPERFEST '95

FREE!

5710 W. Good Hope Rd. • Milwaukee, Wisconsin • 414-358-0333 • Toll Free 1-800-558-0411

FRIDAY, MAY 19: 3:00 P.M. – 8:00 P.M. • SATURDAY, MAY 20: 9:00 A.M. – 4:00 P.M.

Featuring Representatives from – **ALINCO • ICOM • KENWOOD • STANDARD • YAESU**
and Other Major Manufacturers Including:

**AEA • ALPHA DELTA • ARRL • CQ MAGAZINE • CUSHCRAFT • DIAMOND ANTENNAS • HAL COMMUNICATIONS • HEIL • HY-GAIN
KANTRONICS • LARSEN • OPTOELECTRONICS • OUTBACKER • POLYPHASE • RF CONCEPTS • TIMEWAVE • UNIFIED MICROSYSTEMS**

Application for AMATEUR ELECTRONIC SUPPLY® Credit Card

(MERCHANT USE ONLY)

Merchant Name: _____ Phone Number: _____ Salespersons Name: _____
 Applicant Driver's License No./State Identification No.: _____ State: _____ Expires: _____
 Co-Applicant Driver's License No./State Identification No.: _____ State: _____ Expires: _____
 Account Number: _____ Credit Line \$ _____
 Initial Purchase \$ _____ Down Payment \$ _____

PRIMARY APPLICANT

First Name: _____ M.I.: _____ Last: _____
 Date of Birth: _____ Soc. Sec. No.: _____ # Dep. (not including yourself) _____
 Present Address (NO. & Street): _____ Apt/RR: _____
 City: _____ State: _____ Zip: _____ Home Phone: () _____
 Time at Residence: ____ Yrs. ____ Mos. ☐ Own ☐ Rent ☐ Other _____ Monthly Payment \$ _____
 Previous Address (NO. & Street): _____ Apt/RR: _____
 City: _____ State: _____ Zip: _____ Time at Prev. Res.: ____ Yrs. ____ Mos.
 Employer: _____ City: _____ State: _____ Business Phone: () _____
 Net Monthly Income: _____ Time at Employment: ____ Yrs. ____ Mos. Position: _____ Previous Employment: ____ Yrs. ____ Mos.
 Other Household Monthly Income: You need not list income from Alimony, Child Support or Separate Maintenance unless you wish it considered for purposes of granting credit. Net \$ _____ Source: _____
 PLEASE CHECK ONE OF THE FOLLOWING BOXES: ☐ Checking ☐ Savings ☐ Both ☐ None

CO-APPLICANT

First Name: _____ M.I.: _____ Last: _____
 Date of Birth: _____ Soc. Sec. No.: _____ Employer: _____
 Net Monthly Income \$: _____ City: _____ State: _____ Time at Employment: ____ Yrs. ____ Months
 Other Household Monthly Income: You need not list income from Alimony, Child Support or Separate Maintenance unless you wish it considered for purposes of granting credit. Net \$ _____ Source: _____

TRUTH IN LENDING CHART (Do not sign without reading)

ANNUAL PER-CENTAGE RATE FOR PURCHASES	ANNUAL MEMBERSHIP FEE OR PARTICIPATION FEE	GRACE PERIOD FOR REPAYMENT OF BALANCES FOR PURCHASES	TRANSACTION FEE FOR PURCHASES	LATE PAYMENT FEE	OVER THE CREDIT LIMIT FEE	RETURNED CHECK FEE	METHOD OF COMPUTING THE BALANCE FOR PURCHASES	MINIMUM FINANCE CHARGE
18.9%	None	25 Days	None	\$10.00	\$10.00	\$10.00	Average Daily Balance Method Including New Purchases	None

APPLICATIONS FOR CREDIT WILL NOT BE PROCESSED WITHOUT THE REQUIRED SIGNATURES:

BY SIGNING BELOW YOU:

- (1) Certify that the statements above are true and that we may rely on them.
- (2) Acknowledge that we may obtain a credit report on you.
- (3) Agree that if this application is accepted and credit is extended by American General Financial Center, you will be bound by the terms of the Cardholder Agreement attached hereto, a copy of which has been provided to you.
- (4) Agree that if your application for a credit card is not approved, your application may be given to our affiliate to review and an offer for a retail installment contract or an installment loan (the terms of which may differ) may be made to you. You are in no way obligated to accept an offer from our affiliate.

PLEASE SIGN

PRIMARY APPLICANT SIGNATURE

DATE

PLEASE SIGN

CO-APPLICANT SIGNATURE

DATE

You are applying for a credit card account with American General Financial Center, a Utah Corporation, or for other credit available from its affiliate.

INSURANCE ELECTION OPTION:

Please enroll me in the ChargeGard Plan which protects my credit card account as disclosed. Full details of coverages, exclusions, limitations are contained in the Certificates of Insurance which I understand will be mailed to me. I understand and agree that premiums will be charged to my credit card account as long as my account is in good standing. I understand that if my account is cancelled, my ChargeGard Insurance is also cancelled. I may cancel at any time. I understand that enrollment in the Insurance plan is optional and is not required to obtain/maintain credit.

- ☐ YES, I want ChargeGard Insurance coverage (subject to state availability)
☐ NO, I do not want ChargeGard Insurance.

NY RESIDENTS: No coverage is available in NY.
 *Unemployment and disability coverages are available only to the Primary Cardholder.

PLEASE SIGN

PRIMARY APPLICANT SIGNATURE (person to be insured)

DATE

CREDIT CARD CARDHOLDER AGREEMENT
AND APPLICATION FORM WITH
AMERICAN GENERAL FINANCIAL CENTER

- APPLICATION TO AMERICAN GENERAL FINANCIAL CENTER:** Each person executing the Application for a credit card cardholder account applies to American General Financial Center (AGFC) for the establishment of an open end credit account. If AGFC accepts the application, credit will be extended for (1) the purchase of goods and/or services from businesses that honor the Credit Card Account and (2) the purchase of financial products or services that AGFC may offer from time to time. Each person executing this Agreement agrees to live up to the terms of this Agreement.
- DEFINITIONS:** In this Agreement, "We", "Our", and "Us" means American General Financial Center or AGFC. "You", and "Your" means each person who signs the application and Cardholder Agreement. "Credit Card" means the Credit Card issued to you by us under this Agreement. This Account and all purchases made on it are not binding on us until your credit is approved. The application will be deemed approved and the Account established when we (or the merchant) give you notice of that fact. You will be deemed to have accepted the credit card Account and agreed to be bound by the terms of this Agreement by your use of the Account evidenced by a purchase slip.
- OWNERSHIP:** The Credit Card remains our property and may be cancelled by us at any time without notice. You, and all authorized users, agree to maintain good credit with all creditors. You, and all authorized users, agree to surrender the Card and any other access devices and to discontinue utilization of the Credit Card Account by any means immediately upon request.
- CREDIT LIMIT:** We will tell you what your Credit Limit is on your Account. You promise not to allow the outstanding balance of your Account to exceed your Credit Limit. We do not have to honor any use of your Credit Limit which would cause you to exceed your Credit Limit. If you exceed your Credit Limit we may honor that use of your Account without giving up our rights, and it does not mean that we have to honor other uses which would cause your Credit Limit to be exceeded. We may increase or decrease your Credit Limit at any time.
- YOUR RESPONSIBILITIES UNDER THE AGREEMENT:** You agree as follows:
 - To repay us for all purchases made under the Account, plus Finance Charges and any other charges due under the Account, as described in this Agreement, in accordance with the monthly billing statements we will send you.
 - That you are responsible for purchases made by any person you allow to use your Card or Account.
 - Not to repay the outstanding balance to exceed your Credit Limit, but if you do you agree to repay us such excess amount within 10 days after our request. Exceeding the Credit Limit will result in our changing your Account an over-the-credit-limit fee.
 - Not to allow the Account or Card to be used by anyone other than yourself and authorized users.
 - To give us credit information as we may request from time to time.
 - To notify us of a change in your name and address.
 - To live up to all other provisions of this Agreement.
- YOU MAY NOT COMPROMISE A DISPUTE BY NOTATION ON A NEGOTIABLE INSTRUMENT:** No dispute in the amount owed under this Agreement may be settled or compromised by a notation or statement on the back or front of any negotiable instrument intended for payment of the debt or by any document, whether or not accompanied by a negotiable instrument which document purports to compromise or settle the debt or have us acknowledge the debt as paid in full by the act of negotiating a negotiable instrument. All such documents or negotiable instruments must be sent to the address for billing errors contained in this Agreement. Any actions arising under this section shall be determined in accordance with Utah law.
- RETURNED CHECK FEE:** We may assess, and if assessed, you will pay, a returned check fee of \$10.00 for any check or other form of negotiable instrument offered in payment on your Account which is presented for payment and which is subsequently not paid.
- OVER-THE-CREDIT-LIMIT FEE:** If you exceed your credit limit you will be charged a \$10.00 over-the-credit-limit fee.
- LATE PAYMENT FEE:** We may assess, and if assessed, you will pay a \$10.00 late payment fee when you fail to make at least the minimum monthly payment within 10 days of the Payment Due Date. Payments are not considered made until date of receipt.
- COLLECTION COSTS:** To the extent permitted by law, if we must refer the collection of your Account to an attorney, not a salaried employee of ours, you promise to pay us a reasonable attorney's fee and all court and collection costs actually incurred by us in connection with any collection proceeding as may be allowed by law.

ANNUAL PERCENTAGE RATE FOR PURCHASES	ANNUAL MEMBERSHIP FEE OR PARTICIPATION FEE	GRACE PERIOD FOR REPAYMENT OF PURCHASES	TRANSACTION FEE FOR PURCHASES	LATE PAYMENT FEE	OVER THE CREDIT LIMIT FEES	RETURNED CHECK FEE	METHOD OF COMPUTING THE BALANCE FOR PURCHASES	MINIMUM FINANCE CHARGE
18.9%	None	25 Days	None	\$10.00	\$10.00	\$10.00	Average Daily Balance Method Including New Purchases	None

- CANCELLATION:** We own the Credit Card. You may not assign the Account. On request you must surrender the Credit Card to us or any authorized institution or merchant. We may cancel this Agreement at any time, subject to applicable law. You may cancel this Agreement by sending us a written request for Account cancellation with all your Cards and other means of Account access cut in half. Cancellation will not affect the existing obligations.
- DEFAULTS AND ACCELERATION:** All amounts you owe under this Agreement may at our option and without further notice become immediately due and payable if you default under this Agreement. You will be in default under this Agreement if you fail to pay any required amount on time, make any false or misleading statements to AGFC, or otherwise fail to comply with this Agreement. We may cancel your Account and require payment of the full amount you owe us if you do become bankrupt or insolvent, or if we deem yourself insecure, believing in good faith the prospect of payment thereunder to be impaired.
- CHANGES TO THIS AGREEMENT:** We may change the terms of this Agreement from time to time and shall give you notice of the changes as required by law. Such changes may include, without limitation, changes in the monthly periodic rate (and the corresponding Annual Percentage Rate) and changes in the method of computing Finance Charges. If we do so, such changes will apply to both the outstanding balance in your Account and future transactions.
- LOST OR STOLEN CARD:** You may be liable for unauthorized use of your Card. You will not be liable for unauthorized use that occurs after you notify American General Financial Center, Service Center, P.O. Box 3005, Evansville, Indiana 47730-3053, 1-800-628-9324, orally or in writing, of loss, theft, or possible unauthorized use of your Card or Account. In any case, your liability shall not exceed the lesser of \$50 or the amount of the unauthorized use.
- DELAY IN TAKING ACTION:** We will not lose any of our rights under this Agreement if we delay taking action for any reason. To the extent allowed by law, we may take other action not listed in this Agreement. If we take other action, we will not lose our rights under this Agreement.
- CREDIT INFORMATION:** As required by law, you are hereby notified that if you fail to fulfill the terms of your credit obligations a negative credit report reflecting on your credit record may be submitted to a credit reporting agency. You agree that we may request a consumer credit report on you and may use it in connection with any application for establishment of this Account. You also agree that we may provide information about your account, consumer report information and other information we may have about you to affiliates of ours for possible marketing to you of financial services provided by our affiliates.
- APPLICABLE LAW:** This Agreement shall be governed by and interpreted entirely in accordance with the laws of the State of Utah, or, to the extent such laws are superseded by federal law, federal law shall apply. AGFC will process your application, make the decision to approve and open your Account and advance credit for you from our Midvale, Utah office. You agree that all terms, charges, fees and conditions are material to the determination of the Finance Charges, Annual Percentage Rate, and Monthly Periodic Rate.
- APPLICATION OF PAYMENTS:**
 - Payments are allocated between Special Payment Plan Purchases and purchases not made under any Special Payment Plan (herein Regular Revolving Purchases) in the following priority:
 - Delinquent Special Payment Plan Purchase balances.
 - Delinquent Regular Revolving Purchase balances.
 - Special Payment Plan Purchases minimum payment due.
 - Regular Revolving Purchases minimum payment due.
 - Payments in excess of the minimum payment due and delinquent amounts will be applied first to the Regular Revolving Purchases balances and then to the Special Payment Plan Purchases balances.
 - Please follow the instructions on your billing statement if you have more than one purchase and wish to apply your payment to a specific purchase.
 - For that portion of the payment allocated to the Regular Revolving Purchases side of the Account, the payment will apply:
 - First to the sum of fees and accrued Finance Charges.
 - Then to the previous billed purchases.
 - Then to new purchases.
 - For that portion of the payment allocated to the Special Payment Plan Purchases side of the Account, the payment will apply first to the delinquent amount of the oldest Special Payment Plan Purchase on the Account, reducing first the interest and then the principal. When the payment clears the delinquent amount of the oldest delinquent Special Payment Plan Purchase, the payment applies to the next oldest delinquent Special Payment Plan Purchase on the Account. When the payment clears all delinquent amounts for Special Payment Plan Purchases, the payment applies

- to the interest and principal. Interest and/or principal is reduced on Special Payment Plan Purchases in the same sequence as the purchases occurred.
- FINANCE CHARGES:** Finance Charges begin on the date of posting. You will avoid Finance Charges on Purchases if you paid the entire new balance shown on your previous billing statement by the Payment Due Date. If the new balance is not paid in full by the Payment Due Date, Finance Charges will begin to accrue on the Average Daily Balance of Purchases (defined below). This includes previously billed and unpaid Purchases and new Purchases, whether or not billed on your periodic statement, from the date of posting. The Finance Charge on your Account is figured by applying the Monthly Periodic Rate of 1.575%, which is an Annual Percentage Rate of 18.9%, to the Average Daily Balance. To get the Average Daily Balance on which Finance Charges are computed, we add the total daily balance of purchases (both previously billed and unpaid purchases and new purchases, whether or not billed on your periodic billing statement, yet) plus any unpaid balance of purchases under a Special Payment Plan which first became subject to Finance Charges on such day and we deduct any payments or credits. The sum is divided by the number of days in the statement period. (Special Payment Plan purchases which have not become subject to Finance Charges are not included in the Average Daily Balance.)
- SPECIAL PAYMENT PLAN PURCHASES:** In addition to Regular Revolving Purchases that earn Finance Charges as stated above, you may, from time to time be permitted to make purchases with the following Special Payment Plans which will be referred to as your purchases slip:
 - Deferred Payment Purchases - No payment will be due on the Deferred Payment Purchase for the period specified on the purchase slip; however, Finance Charges will begin to accrue on the date the Deferred Payment Purchase posts to the Account. The Deferred Payment Purchase will not defer the payment due date for other purchases made on your Account.
 - Deferred Finance Charge Purchases - No Finance Charges will accrue on the purchase for the period specified on the purchase slip; however, regular payments must be made. Finance Charges will not be deferred for other purchases made on your Account.
 - Deferred Payment and Deferred Finance Charges - No payments will be due and Finance Charges will not accrue for the period specified on the purchase slip. Finance Charges will accrue and payment must be made for other purchases made on your Account.
 - Same as Cash - If during the time period (the option period) specified on the front of your purchase slip you pay of the balance of the purchase, no Finance Charges will be assessed on the purchase. However, if the balance of the purchase is not paid during this time period, Finance Charges will be assessed from the post date of the purchase. Minimum Payments may be required during the option period as specified on the front of your purchase slip and in this Cardholder Agreement.
 - Reduced Annual Percentage Rate - Finance Charges will be calculated at a lower annual Percentage Rate than disclosed in the Finance Charges paragraph of the Agreement. The lower Annual Percentage Rate applicable to such special purchases will be disclosed on the purchase slip and on your monthly periodic statement.
- BILLING STATEMENT/MINIMUM PAYMENT:** If your Account has a balance, we will send you a Billing Statement (Statement) periodically. You must pay at least the Minimum Payment given on the Statement by the Payment Due Date. The Minimum Payment will be the greater of 3% of the Total New Balance plus the monthly payment amount due on special Payment Plan purchases or \$10.00. A total New Balance of less than \$10.00 is payable in full.

You have the right to pay all or part of the balance due under the Account at any time without a prepayment penalty. Payment made in an amount greater than the Minimum Payment does not relieve you of your obligation to pay the next Minimum Payment when it comes due. We will not refund to you a credit balance of \$1.00 or less.

We can accept late payments, partial payments, checks and money without losing any of our rights under this Agreement. We can also delay in enforcing our rights under this Agreement any number of times without using them. Also, we may, to the extent permitted by law, take other action not listed in this Agreement.
- PLACE TO SEND PAYMENTS:** Payments you make on the Account are to be mailed to the address we set forth on the Monthly Billing Statement.
- SECURITY INTEREST:** (Except in New York)

We will have a purchase money security interest in all goods purchased on your Account until the goods are paid for in full. If you do not make your minimum payments, we may take possession of only the goods that have not been paid for in full.
- ADDRESS:** You may write us at American General Financial Center, Service Center Post Office Box 3121, Evansville, IN 47731-3121.
- OTHER PROVISIONS:**
 - We shall have no liability to you should any person refuse to honor your Card or Account, (b) you may not assign your rights under the Account, (c) we may assign our rights without obtaining your consent, (d) any notice given by or to any person executing the Application, or action taken or agreement made by any such person, shall bind all such persons.
- EXECUTION OF AGREEMENT:** Your signing the Application also binds you to the terms of this Agreement. If we accept your application and extend your credit, You will be given a copy of this Agreement.
- New York residents may contact the New York State Banking Department to obtain a comparative listing of credit card rates, fees and grace periods. New York State Banking Department 1-800-518-8866.



Main Store Display Area



Paul and Don in Video and Camcorder Display Area

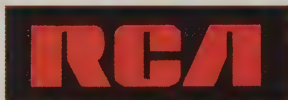
Audio Plus

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AUTHORIZED DEALER
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- SONY-ES
- JVC
- BEL
- PANASONIC
- POLK AUDIO
- CARVER
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Literature Request Line: 800-432-8873

FAX: 206-775-2340

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Starkville, MS 39759

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FAX: 601-323-6551

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FAX: 714-630-7024

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FAX: 603-627-1764

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FAX: 817-328-1409

Limited Warranty: 1 year

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1202 E. 23rd St.
Lawrence, KS 66046

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Service/Tech Support: 913-842-4476

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24 hour BBS support: 913-842-4678

(1200-14,400 v.32 bis 8 bits no parity)

FAX: 913-842-2021

Limited Warranty: 1 year, parts/labor.

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Franklin Square, NY 11010

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FAX: 516-328-7506

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FAX: 206-454-1509

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Irvine, CA 92714

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FAX: 714-852-8716

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Fax: 804-340-6809

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Technical Support: 800-647-8324

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619-744-0900 (DIA)

FAX: 619-744-1943

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FAX: 206-794-0294

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FAX: 408-779-8845

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24 hour BBS support: 913-842-4678

(1200-14,400 v.32 bis 8 bits no parity)

FAX: 913-842-2021

Limited Warranty: 1 year, parts/labor.

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FAX: 312-763-3377

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FAX: 305-561-9133

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POLICIES • WARRANTIES • OTHER INFORMATION ...

■ **NEW EQUIPMENT** AES sells only factory sealed items as new. On occasion we may have "Demo" gear available at reduced prices; call for availability.

■ **TRADE-INS** We will take your clean late model SSB or FM gear in trade towards New Equipment shown in this catalog, or we will buy it outright for Cash - write or call for a quote. In order to receive the full value as quoted, your equipment must arrive at our location in good electrical and physical condition, free from abnormal wear, defects, modifications, corrosion and smoke residue. The manual and any original accessories that came with the unit must be included. Note: We do not take in data controllers, UHF/VHF amplifiers or antennas. Hand-held radios quoted in store only.

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■ **AES CREDIT CARD** Can be used at any AES® location for new or used gear. No payment for 90 days (Interest accrues).

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■ **FLAT RATE SHIPPING!** AES has simplified shipping calculations on UPS Ground service to the 48 states by utilizing flat rate categories. See details on page 154. Any faster shipping methods must be paid in advance or with credit cards when ordering.

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■ **AES SHIPS TO U.S.A.** it's Possessions, APO/FPO, and Canada. **Canadians Note:** Returned equipment not originally manufactured in the U.S. will be subject to valuation and custom charges, plus broker's fees. Check customs before shipping anything to us, including new equipment for warranty repair. AES will not accept any shipments from Canada unless all fees are paid in advance. ■ **OTHER EXPORTS** See page 152 for details.

■ **SPECIAL ORDER ITEMS** Items marked "SPECIAL ORDER" must be paid for in advance with check or money order and are non-cancelable.

■ **DAMAGED ITEM???** If you receive a shipment and discover damage to it, NOTIFY THE CARRIER IMMEDIATELY. DO NOT return merchandise to us until notified to do so by the carrier. Retain all packaging materials including styrofoam peanuts, inner and outer cartons, labeling, etc. for inspection by the carrier - without this, your claim may be denied. With shipments properly packaged (as all our shipments are), the ultimate responsibility for delivery in good condition rests with the carrier.

■ **DEFECTIVE ITEM???** If your NEW radio or accessory fails within 10 days after you receive it, bring it in or send it back via UPS prepaid and insured. Pack well and include original carton with all packing material, the warranty card, and a photocopy of your invoice. If we can't repair the item within a reasonable length of time, we will replace it. If the item is out of stock or back-ordered, and you can't wait for the repair, you may request a refund, or credit towards other merchandise. Not applicable to audio/video tapes, cable, special ordered or drop-shipped items, software, antennas or towers (these items warranted by manufacturer only). If you have equipment that appears defective, call our Customer Service Department at (414) 358-0333 concerning the warranty repair procedure.

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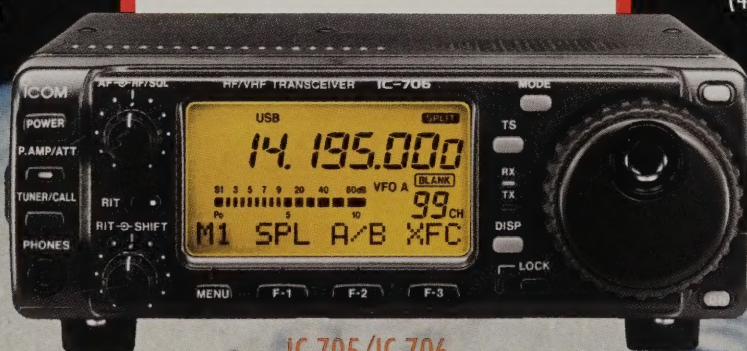
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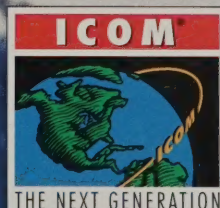
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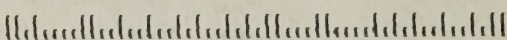


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
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